

THE ECONOMIC EFFORT OF WAR

by
R. W. B. CLARKE

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Foreword

THE COURSE of economic events since the war began has satisfied no one. The housewife is exasperated by the rise in food prices and the actual shortages; thousands of workers face unemployment and see no prospect of getting work; business men are bewildered by the flood of regulations and decrees; civil servants see carefully prepared plans destroyed by ill-informed and by no means disinterested criticism; men and women who joined new Ministries at the outbreak of war find themselves thwarted and disappointed by the lack of opportunity to get things done, and the Government has to meet a barrage of criticism more unanimous and virulent than any that it had to face in peace-time.

This is a state of affairs of extreme danger. Its effect upon morale is highly damaging; when the Government should be leading and inspiring the people, it is floundering. It may conceivably endanger the prospect of victory, for Britain's strength is primarily economic, and failure to exert that strength effectively simply means failure to win the war.

The worse the muddle gets, the more difficult becomes the task of righting it; the voice of constructive criticism is drowned by the shouts of vested interests, which at the beginning of the war were on the defensive, fearing suppression, but have recovered their self-confidence and are entrenching. How else, indeed, can one explain the Government's rejection of the

Ministry of Food's plan for comprehensive rationing, a plan proved by hard experience to be absolutely essential? How otherwise can one explain the gradual retreat from pooling and standardization, proved means of reducing costs of production and distribution, and so of maintaining the standard of life in wartime?

So vociferous is the criticism of the Government, indeed, that there is real danger that it may serve a destructive purpose. The whole principle of control, the need for which has been demonstrated time and time again, is now seriously endangered. The lessons of the last war, learnt painfully and at awful cost of life and material, are being jettisoned. At the present rate, it may soon become psychologically impossible to introduce the forceful and energetic measures which the situation requires.

Why has this happened? How can the muddle be righted? There has been altogether insufficient understanding, by the Government and by the public, of the nature of the problems which arise, of the principles which are involved, and of the objectives which must be attained. This book is an attempt to explain them; it is an attempt to establish the first principles of war-time economic policy, and to relate them to the actual situation.

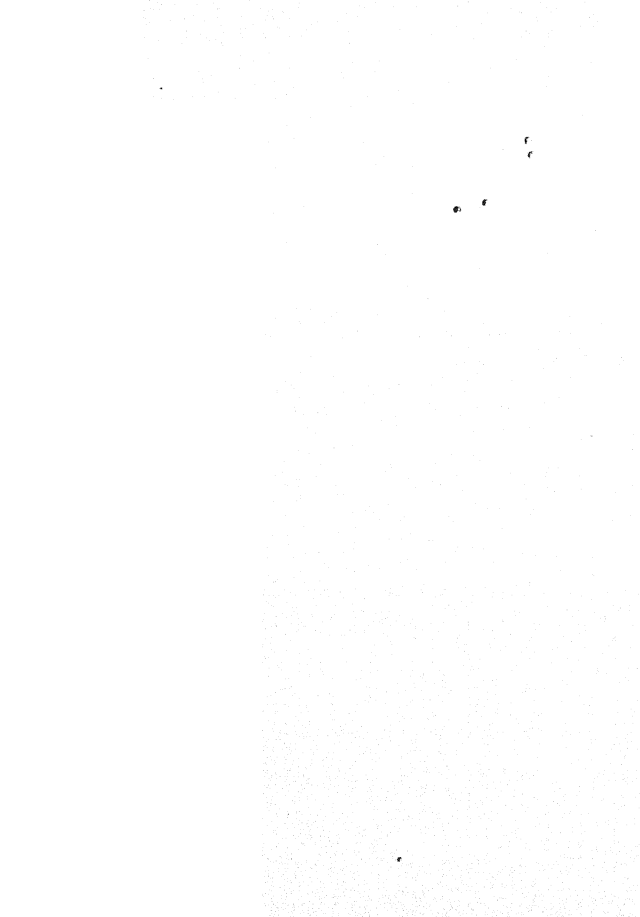
To do this, it is necessary to make assumptions about the possible scale of the war effort. I have assumed that, at the peak of the war, total Governmental expenditure will be running at the rate of £4,000,000,000 a year at pre-war prices, a figure which may be com-

pared with the present £2,400,000,000 a year. I have tried to show what such an effort would mean in terms of the standard of living, man-power, the Budget, and so on. If the effort is less than this, the economic sacrifices which will be required will be less than I anticipate. But this would be no source for satisfaction; it would simply mean that the nation was achieving less than its maximum potential war effort. And to believe that we can defeat the Nazis with less than the maximum effort is childish optimism.

Wherever possible, I have tried to supply facts and figures, and I have given specific references for these figures, except where they are taken from well-known British official sources. The work of Mr. Colin Clark is an indispensable foundation for any factual analysis of the economic structure, and I have drawn upon it extensively. I am much indebted to Mr. W. T. C. King for valuable comment, and likewise to Mr. Jules Menken, with whom and others I had hoped to collaborate in a major work on national defence problems as a whole, an enterprise which was unfortunately cut short by the war when within sight of completion.

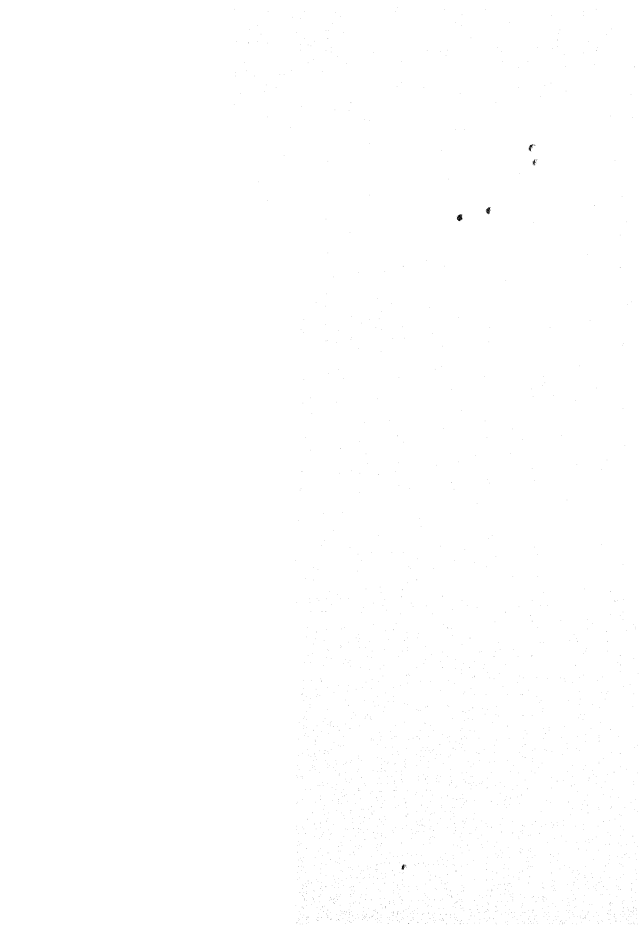
R. W. B. CLARKE

NOVEMBER 7, 1939



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CHAPTER ONE

THE CHANGE TO WAR ECONOMY

EVER SINCE the last war, we have been aware that modern warfare is economic war. The Allies' industrial and financial resources, rather than their preponderance in the field, decided the last war, and there is not much doubt that the group of nations which can produce armaments fastest will win this one. Once the initial stocks of armaments have been exhausted, the war will become a struggle of economic systems. It is upon this fact that our confidence in victory is based, for our economic superiority over Germany is overwhelming, and is in reality much greater than it was in 1914. The caution which both sides have used so far in the expenditure of war material underlines the importance of the economic factor, and strongly suggests that in the long run the economic factor will be decisive.

It is somewhat naïve, however, to think that economic strength will somehow win the war of its own accord. Just like any other sort of potential strength, it can win only if it is exerted. One of the reasons why the last war went on for four years was the extreme delay in the mobilization of Britain's economic strength. Not until 1917 was the British structure mobilized for war. Our maximum potential was not exerted until 1918, and when it was exerted it was decisive. The

lesson has been learnt, and economic mobilization is proceeding fast. But it is not an easy task, like the mobilization of an army, which is, in the last resort, not much more than a problem of organization. It is full of complications and difficulties, and very clear thinking is necessary in order to carry it through.

The objective, in the simplest terms, is the transformation of a highly complicated economic machinery, designed primarily for the satisfaction of peacetime needs, into a machine for turning out war material and for satisfying the most elementary requirements of the civil population. The more efficient this war machine is—that is, the more completely it succeeds in using the whole man-power of the nation and in taking the best advantage of the nation's resources of capital—the greater will be the strength of the war effort. The ideal war economy is an economy in which every man and woman is busily working, and in which every pound of capital is being devoted to the financing of the effort, and in which the only goods and services which are being produced are things that are directly necessary for the conduct of the war and for the maintenance of the health and morale of the nation. If the economy falls short of that ideal, then either the nation is exerting less than its maximum strength in the field or the standard of life of the people is being sacrificed more than it need be. The more nearly the economy attains to the ideal, the more guns we shall be able to have with the least sacrifice of butter.

This structure at which we are now aiming is ob-

viously vastly different from the peace-time capitalist structure. The essence of the peace-time economy is the fact that the decisions about what will be produced depend upon a highly complex process. Capital and labour move to those enterprises which offer them the best prospect of profit and wages. Those who have money to spend have certain preferences between ways of spending it. By the working of the price system, a balance is kept between supply and demand, and economic welfare is maximized. The process does not work particularly well, for there are all sorts of frictions which hamper its free working—monopolies, obstacles to movement of labour and capital, and so on. But broadly, this explanation of what takes place does conform fairly well with the observed facts. The freedom of capital and labour to seek the best reward, and the freedom of choice of the individual to spend his money in the way that gives him most satisfaction are the essential characteristics of the capitalist system.

This has nothing at all in common with the war system. In war, the Government makes the decisions about what will be produced. It becomes the economic dictator, for it purchases anything up to one-half of the goods and services which are produced, and has unlimited funds with which to pay for them. The Government may or may not control the production process directly by decree; it may or may not nationalize or regulate. But by its purchasing power it inevitably dominates the economic structure. Moreover, even outside the purchase of war material and services, its in-

fluence must be very great. Its decrees must also dominate the civil sector. In time of shortage of essential foods, the decision about what should be produced cannot be left to the choice of those who happen to have purchasing power to buy. It becomes necessary, as part of the military requirements of the situation, to ensure that each citizen has a fair share of what there is, regardless of his purchasing power. The people's needs, rather than the things which they can afford to buy, must become the criterion. And the Government has to decide what those needs are. So we get a sort of war collectivism, in which the production structure is based upon the war needs of the nation in the widest sense rather than upon the inter-relation of producers' attempts to maximize profit and consumers' desire for maximum satisfaction limited by their purchasing power. The two types of economy are thus fundamentally different.

Some economists argue that the change to a war economy can best be accomplished by the normal working of the price system. They maintain that the Government should rely upon the eagerness of capital to find an opportunity for profit and eagerness of labour to get more wages. If high enough prices were offered for Government contracts, and if wages in the armament industries were allowed to rise, then all sorts of people would seek employment who are now unoccupied, and capital and labour would automatically move away from peace-time pursuits to the war industries. This is an interesting idea, but it is difficult to

believe that its advocates seriously recommend its adoption. It is by no means watertight theoretically: there is no evidence in the past to support the view that transference would take place nearly quickly enough unless fabulous rates of wages and profits were allowed in the armament industries. It is hardly worthwhile to argue the case as a practical proposition, indeed, for it completely ignores the all-important fact that whether we like it or not war is a break with the past. The economic adjustment which it necessitates is tremendous. But hardly less important is the revolution which takes place in social values. In peace, the man who spends conspicuously is a pillar of society: in war he is denounced as a profiteer. In peace, the man who makes a fortune by sweating women's labour and by selling shoddy goods at exorbitant prices may become mayor: in war he is regarded as an enemy of the people. The social values which are necessary to the peace-time working of a capitalist society—respect for profits, ambition to live in luxury, the ranking of personal success in money terms—are turned upside-down in wartime. Consequently, however possible it may be in theory to run the war economy by reliance upon free capitalist motives, in practice there must be positive planning on a large scale.

In this planning, it is of the greatest importance that the fundamental nature of the change should be borne in mind from the beginning, and that the objectives should be kept clearly in view. There is always a danger that a Government, faced by grave problems,

will wildly improvise. In the last war, our improvisation was extraordinarily successful in the end, although it was very much slower in reaching the objective than it need have been. But it is by no means certain that the improvisation will always succeed. Major transition is the most difficult problem in economic practice, and there should be a clear understanding of the principles involved. In broad outline—the object of this book is to fill in the detail—there are two main things that the Government must do. The first is to make the national output as big as possible, by bringing into employment all available labour and material resources and by increasing the efficiency of those who are already employed. The second is to make radical changes in the sort of things which are produced, to divert resources away from non-essentials and into the service of the war-machine. These two objectives are of equal importance. The second is inadequate if it runs counter to the first: the first is useless if it is not accompanied by the second.

The first aim of Governmental activity—the increasing of the national output by full use of resources—requires a great deal of planning at once. There are in any country large available unemployed resources. There are those ordinary workers who happen to be unemployed at the outbreak of war. There are married women who want to work but are at present prevented from doing so. There are people who have retired on pensions, and there are the old people who have no pensions. There are young women of the middle class

who are kept by their parents. There are idle folk who live entirely on investment income. There are blind and crippled people who could do something useful if only something could be found for them to do. These sources of unemployed and potential workers should all be tapped. These new workers can either take jobs in the expanding war sector of the economy—in the active and civil defence forces or in the arms factories—or they can take the jobs in other sectors of the economy of men and women who have moved into the war sector. Even if they take voluntary jobs and part-time jobs, they are releasing other workers for more important tasks. This is one way of increasing the war effort without any diversion of resources at all. In the last war, it was the most spectacular development of all—the sudden use of literally millions of women's working capacity which had never been used before, and which was hardly known to exist.

Moreover, there are tremendous possibilities of increasing production by increasing the productivity of the labour force. British industry is much more efficient than it was in 1914, but it is by no means perfect. By a better use of the available skilled workers, by introduction of mechanization, by standardizing and comparing costing systems, by exchange of gadgets, by a dozen methods of rationalization, it is possible to increase productivity. The fact that in peace-time different undertakings in one industry have vastly different profit records shows the existence of substantial inefficiency. With the incentive of the war effort, and

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with more energetic management, the output of the present labour force could assuredly be increased. It will be necessary, of course, to enlist the full co-operation of the trade union movement, and in particular to provide adequate safeguards of trade union privileges after the war, but there is no reason to doubt that this will be forthcoming if the unions are approached sensibly and skilfully. In addition to these methods of increasing output by more intensive work, there is the possibility of increasing effective hours of work by large-scale overtime. In the engineering industry this process had been taken some distance even before the outbreak of war: it can now be extended throughout the essential trades. There is not much doubt, indeed, that in the peace-time capitalist economy there are all sorts of slack which can be taken up in emergency. There may perhaps be less slack than there used to be, but slack still exists. This slack can be eliminated, however, only by the most carefully planned action. Its elimination depends partly upon propaganda, partly upon administrative action, and partly upon sensible handling of the interests concerned. But it can be done.

On the other hand, the planners may have to contend with loss of productivity because of air-raid warnings. Industrial time is being lost because of air-raid warnings, and it may indirectly be lost because of the effect of night-raids upon the workers' sleep. There is also the direct destruction of industrial capacity by air attack, which must be taken into account. It is too early yet to see the quantitative effect of these influences upon

productivity. It seems reasonable to suppose, however, that the measures to be taken to increase the labour force and to increase productivity could at least offset the loss to productivity in air-raids. A decreasing part of the nation's industrial activity is being carried on in the vulnerable areas, and the gradual development and improvement of defence against air attack should enable the Government gradually to lessen the industrial dislocation which warnings create. The national output should therefore at least be maintained.

The Government's second task is to transfer the resources which are at present employed into the most useful directions. For schematic purposes, the activities of the community may be divided into three categories: war sector (which includes the fighting forces), essential civil sector, and non-essential sector. Very few industries, of course, can be definitely placed in one or another of these categories. Aeroplane production is obviously in the first, grain-milling in the second, and portrait-painting in the third. But most industries are partly in one and partly in others. Some of the clothing industry (making army uniforms) is in the first category, about one-third of it may be regarded as being in the essential civil sector, and the rest is non-essential. The cinema industry and the brewing industry would be placed by some people in the non-essential class, but in actual fact a large part of their output must be ranked as essential for the maintenance of civil morale. The advertising industry falls into all three categories: some is needed for the war sector (e.g. recruiting

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propaganda); some is needed to direct public demand into the right channels (e.g. "Eat more fish" campaigns when the object is to economize in imported beef and mutton), and some is obviously non-essential. For services such as retail distribution and road transport it is impossible to get any idea of the proportion which is non-essential. For any given industry or service, the boundaries are debatable. But the conception is nevertheless useful. As the war proceeds, of course, the definition of "essential civil sector" will become increasingly stringent as further resources have to be freed in order to strengthen the war sector. In Germany, even in peace-time the non-essential sector was substantially eliminated—the building of stadia for Nazi demonstrations is presumably essential for the maintenance of morale—and the evidence suggests that even in the first few weeks of war the essential civil sector has been cut down to a minimum. In England, on the other hand, we are still a very long way away from the elimination of non-essentials.

The simple plan for the diversion, of course, is to transfer resources simply from the non-essential sector to the war sector. The first expansion of the war sector should be (and is being to a large extent) built up exclusively from new resources and from the non-essential resources. The essential civil sector should be left as undisturbed as possible. Ideally, of course, the Government, as soon as it is ready to take one hundred thousand men into the armed forces and into new arms factories, should take them straight away from

the existing unemployed and previously unoccupied, and from the non-essential industries. That would create the least dislocation. But in practice the process cannot be as smooth as this. Workers are not easily interchangeable from occupation to occupation, and many are untrainable. The Government has not yet enough direct industrial control and knowledge to undertake such a detailed transfer. Moreover, in so far as the expansion of the war sector requires the recruitment of soldiers, it would evidently be wildly unjust to confine that recruitment to the unemployed and to non-essential workers. Nevertheless, it is this smooth and planned transfer that the Government should have in mind all the time.

In the last war we saw the effect of attempting this diversion of resources without proper planning. Factory workers in the war sector were allowed to join the armed forces: men and women were recruited into the war sector without the slightest regard for their present jobs and qualifications. As the war proceeded, the armies in France were combed and re-combed for essential workers. There was tremendous waste and dislocation. Now, with the principle of reserved occupations established, and with certain changes of employment dependent upon the Government's sanction, the position is very much more satisfactory in every respect. But it is still very necessary that the Government should realize that the least dislocation possible should be tolerated, and that the war sector, fighting and factory, should be expanded as far as possible from

new workers entering the system and from the non-essential occupations rather than from a general recruitment of workers as a whole.

In terms of hard cash—or, rather, in terms of guns and aeroplanes—dislocation in the process of transfer may be ruinous. Suppose, for example, that the Government directly or indirectly prohibits non-essential industries and services before it is ready to absorb those workers into the arms sector. Or suppose—a much more realistic assumption—that employers in those industries, scared by the fear that the demand for their products would stop in wartime, indulge in large-scale dismissals. This actually happened, of course, in the first few weeks of the war. Firms hurriedly evacuated from London, leaving behind unemployed anything up to three-quarters of their staff. The West End stores, facing complete stagnation of business, dismissed literally hundreds of workers. Unscrupulous employers took the opportunity to reduce their staffs. If these workers could immediately be absorbed into the war sector, then the dismissals would be beneficial. But if not, then unemployment is increased, incomes are destroyed, the national income falls, and the work of these people is irrevocably lost. The fall in the national income reduces taxable capacity, and unemployment benefit has to be paid. The war effort is consequently weakened, for the displaced workers have to be provided for and are contributing nothing whatever to the national income. Although the goods and services that they provide are non-essential, it is

worth the nation's while for them to continue to provide them for the time being, until the point is reached at which transfer is necessary. To put the case the other way round, nothing is gained by the national economy—except, perhaps, to the extent that they consume less imported goods when unemployed than when working—by these workers having stopped producing non-essential goods and services. The war effort is not advanced one iota. Once the arms sector is ready to take them—when the Government is ready to train assistants at West End stores for shell-filling, or is ready to take solicitors' clerks into the army—then the reduction of the non-essential sector is a positive gain. But dislocation in the transfer provides no benefit for anybody. In fact, it is definitely detrimental to the war effort, because of its effect upon taxable capacity, health and public morale. The same applies, of course, to private individuals' economy (except in imported goods) before the point of full employment and diversion to the war sector is reached.

All this is very relevant to the first objective, which is the maintenance of the national income at the highest possible level. It is the objective which is most easily overlooked. The second, the smoothest possible transfer, is plain. The key to successful Government planning of the transition lies in the ability to draw new workers into the economic system and to expand the war sector just as fast as the new workers come in and the non-essential sector is contracted. Lastly, it is better for the national effort for people to be at work

producing non-essential goods and services than it is for them not to be producing at all. These are the objectives of Governmental policy: the technical apparatus which the Government creates—the control it assumes, the financial and fiscal policy which it adopts, and the monetary policy which it enforces on the banks—is no more than the machinery by which it proposes to attain these objectives.

CHAPTER TWO

THE NEEDS OF WAR

SO FAR the argument has been a general one. It is the simple basis of a war economy. The next step is to relate it to the real facts of the situation as they now appear. How large are the changes which are ahead? How big will the war sector be, and what are the implications for the civil population of a war sector of such magnitude? It is only possible, of course, to make the roughest of estimates of the quantities involved. But if we are to review the problems of the transition at all rationally, we must have estimates of some kind; even the light of one candle is better than complete statistical black-out.

First of all, it is necessary to get some idea of Britain's capacity to produce. That must necessarily be the upper limit of our resources, and is the fundamental limitation upon our war potential. The exact extent of our capacity to produce, of course, is not known: it cannot be determined until we try to produce as much as we can, and in peace-time we never do try to produce as much as we can. It is possible, however, to get quite a good idea of the order of magnitude of our industrial capacity. Mr. Colin Clark has estimated the national income in 1937,¹ the total value of goods and

¹ *Economic Journal*, September 1938, pp. 444-7. In future foot-notes, this reference will be written *E. J.* References to Mr. Clark's major work, *National Income and Outlay*, will be written *N.I. & O.*

services produced in Great Britain, at £5,734,000,000. This may be adjusted upwards in order to account for the increase in the number employed^a and employable since that time. The national income at pre-war prices, on this reckoning, would probably reach its maximum at about £6,250,000,000 a year. To this we may add £1,000,000,000 for imports, and thus get a disposable peace-time maximum of some £7,250,000,000 a year, some of which, of course, must be allocated to exports in order to pay for the imports.

For our present purpose, we are mainly concerned with the way in which this income is spent. Some of it is spent on consumption-goods of various kinds, ranging from food to motor-cars. Some of it is spent on new capital expenditure, from roads and houses to ships. Some of it is allocated to maintenance and depreciation of property. Some is spent on public services, including on the one hand civil services such as education and on the other defence services. Adjusting Mr. Clark's figures again, for the division of the total between these types of spending, we get the following table:

TABLE I
NATIONAL OUTLAY, PEACE-TIME

	£ millions
Consumption of folk earning below £250 a year .	2,850
Consumption of folk earning above £250 a year .	1,650
New capital expenditure	400
Maintenance and depreciation	400
Exports, visible and invisible	900
Public services (non-cash-benefit social services) .	350
Defence expenditure	700
National income <i>plus</i> imports	<u>7,250</u>

This shows how the national income and imports would be spent in a peace-time year with very heavy defence expenditure, in which resources were very nearly fully employed. Such a year might have been 1939-40, if the war had not come. Some of the items need some explanation. The consumption figures represent actual consumption, and must not be confused with income. They include, of course, National Debt interest payments, unemployment benefit, old-age pensions, and make allowance for saving. They represent the actual consumption-goods which people buy. The new capital expenditure figure represents new building, industrial plant, public works contracting, ships and constructional work of all kinds. Maintenance and depreciation speak for themselves. The export item includes exports of British goods and re-exports, and such invisible items as shipping receipts and income from foreign investments. It will be noted that these exports are insufficient to cover the imports, which would have been the state of affairs in 1939-40. The public services include all Government and municipal expenditure, except those items which represent cash benefits, which of course come under "consumption." The main items are hospitals, education, local authorities' services, and cost of administration. Defence expenditure represents the total cost of the armed forces and civil defence.

We see from this table the general extent of the peace-time resources and the way in which they are used. The simplest way to explain the transition to a

war economy is to see how this outlay will have to be changed. The line between fact and imagination, of course, becomes somewhat shadowy here. No one in the autumn of 1914 was able even remotely to forecast the requirements of 1917. The course of the war surprised everyone: new weapons and correspondingly new economic needs came to the front. Nevertheless, from what is known of current military theory and from what is known of past experience, it is possible to make first-order approximations of cost. These are not estimates of the cost in 1940, of course. They are estimates of the cost when the war is in full swing—in the 1917-18 of the present war. These costs will have to be measured in money of pre-war purchasing power. This is not a very satisfactory unit of measurement, but it is the best there is. All sorts of assumptions will have to be made. But it is hoped that the final results will be somewhere near the mark.

The first need of the war—the top item in the list of priorities—is the upkeep and equipment of the armed forces. There is a great deal of evidence available about the experience of the last war—which will presumably now be known as the First German War—both for Britain and for France, and also in even more detail for the United States. In the last ten years, a great many books have been written by Continental experts about the cost of war under modern conditions; of these, perhaps the most interesting is Stephen Possony's *Tomorrow's War*. In the early stages of Germany's rearmament, the economic implications of the re-

armament programme and the problems of economic preparedness were discussed at great length and detail and with great frankness and objectivity in a flood of articles in the German military magazines. The estimates of the various analysts vary widely, but it is possible to work out a sort of least common multiple with which to work. In England, less work has been done on these questions—at any rate publicly—but the annual Estimates and Appropriation Accounts of the services since the beginning of the rearmament programme provide interesting and important material.

Although all the facts which are drawn upon in this chapter have been published in some place or another, it is for obvious reasons undesirable at the present time to republish them in collected form. The reader may take it, however, that the global figures given here are not simply a flight of the imagination, but represent the result of a long analysis of the available information. It is assumed that the military requirement of the situation is to maintain in the field an army of 2,500,000 men—including non-divisional and non-combatant troops—with an air force of 4,000 first-line strength, a navy expanded according to the pre-war programme, and the necessary civil defence forces. Compared with the number of troops mobilized by Britain in the last war, the size of this army looks small. In 1917-18, the average strength of the British Army was 3,827,000. But in war-making, as in everything else, there has been immense technical advance, and an army of this size in 1940 would certainly have

far greater striking power than the bigger army of 1917-18. The point is made very clearly by General Debeney, former Chief of the French General Staff, in an article¹ written in 1933: "If a battalion of 700 men is replaced by 20 tanks and 20 aeroplanes, using less than 100 men, a fighting unit results which is stronger than the battalion which it has replaced." We therefore reckon on the basis of a smaller fighting force. Some theorists would insist, no doubt, that an even smaller force would be adequate. But the figure of 2,500,000 appears to be a reasonable compromise between the views of those who would go back to 1918 and those who believe in a small and highly mechanized force with tremendous mobility and striking-power. Some figure must be taken in order to allow any estimate at all.

It appears from analysis of the needs of such a force that the global cost of maintaining it, including pay, food, clothing, technical equipment of all kinds, and replacements, would be something like £2,850,000,000-3,100,000,000 a year—say, £3,000,000,000 a year. This would be divided, it may be noted, between technical and material supplies and cost of upkeep in the ratio of about $3\frac{1}{2}$ to 1, a vast change compared with the last war, in which the cost of supplies to the Ministry of Munitions was actually less than the cost of paying and maintaining the armies in France. The global figure is appreciably higher than that of the peak of the last war. In 1917-18, the total Government

¹ Quoted by Sternberg, *Germany and a Lightning War*, p. 79.

expenditure on the armed forces was £2,403,000,000. The cost-of-living index, however, had by that time risen by 82 per cent above pre-war level. In terms of 1913 purchasing power, therefore, the cost of the war was £1,320,000,000 a year at the peak. In 1913, the net national income was £2,339,000,000.¹ It may be presumed that it increased by some 10 per cent in the war. Consequently, the cost of the war was about one-half of the national income.² Our suggested figure of £3,000,000,000 is similarly about one-half of the net national income on the assumption that all resources are used.

This figure may prove to be on the low side. It is common knowledge that the cost of war-making has greatly increased since the last war. Sir John Simon, in his Emergency Budget speech on September 27th, pointed out that the cost of maintaining a division in the field had nearly doubled since 1918, and that the cost of naval shipbuilding was twice and thrice as much as it was in 1914. And now we have the Air Force, a highly costly arm. Type for type, Sir John Simon explained, the cost of aeroplanes has increased by between three and seven times since the end of the last war, and we need more of them. In 1917-18, the Ministry of Munitions spent only £72,000,000 on aircraft, whereas even in the peace-time estimates of 1939 the cost of aeroplanes for the year was estimated

¹ Clark, *N.I. & O.*, p. 232.

² Clark estimates that the proportion in 1918 was as much as 60 per cent.—*The Times*, November 27, 1939.

at £90,000,000, a figure which will be multiplied many times in a full year of war. In addition, there is a big expenditure on civil defence, which in the last war was practically unknown. Consequently, there is no reason whatever why we should be surprised that the anticipated cost of our armed forces may eventually be as great as £3,000,000,000 a year in sterling of pre-war purchasing power.

So much for the cost of the armed forces proper. The next important item is the capital expenditure which will be necessary during the war. In the last peace year, the total amount of capital expenditure was some £800,000,000, of which roughly one-half represented depreciation and maintenance of buildings and industrial plant. What are the positions of these activities in the war? We can begin by saying that depreciation and maintenance can probably be halved for the duration of the war. Non-essential industry will in any case be at a standstill, and other civil industry can probably afford less depreciation than it has been allowing recently: British industry as a whole has re-equipped itself very well in the last years, and has ploughed back for development a larger proportion of its very adequate profits than it had done before, and is consequently in a good state to carry on for the time being. Railway and other transport has similarly maintained itself well since the slump: one gets the impression in travelling on London Transport, for example, that the renewals allocation has been very generous. The transport system, however, will have to

bear a very great burden as the war proceeds, and some margin would certainly have to be allowed for renewals. Depreciation and maintenance of building will clearly be at a standstill. An allowance of one-half of pre-war allocations is surely not unreasonable.

At the same time, new private capital expenditure has come to a halt. The closing of all channels of finance and the lack of raw materials make it impossible, even if the entrepreneur wishes to expand. Local authority building has come to an end for the duration. Some building is in progress in the reception areas, to look after the changed distribution of population, but the total volume must be very small. There must at the same time, however, be substantial Governmental capital expenditure. The munitions and aircraft factories begun under the peace-time rearmament programme are being rapidly completed, and the output of existing factories is greatly expanded under wartime conditions, but it is hardly possible that new factory building on a considerable scale will be avoided. Moreover, there will be continuous demand for new machine-tools as factories are changed over to war production, and as the military requirements change. To increase efficiency generally, and to establish quantity production, capital expenditure is necessary. Again, there will be some need for replacements of damage done by air attack. It is impossible to put a figure on such damage, and it is even more impossible to say how much replacement will be necessary, but it will certainly be an increasing item as the war proceeds.

It may be pointed out at this stage, however, that some of these requirements will be met from stocks. The public utilities have ample supplies of replacement material available, built up as a peacetime reserve, and the Government has collected stocks of building material. In so far as the materials are in stock, the only current cost will be that of labour.

The other main item of capital expenditure is shipbuilding. It is still early to say how the German attack will develop, but there is certainly no sign of a shipping crisis similar to that of the last war. In carrying-power, the allied shipping strength is certainly not inferior to that of 1914, and the German relative strength, naval and mercantile, is appreciably less. However, it will almost certainly be necessary to maintain the shipyards at work at full capacity for the duration of the war, and at pre-war prices the cost of operating them to capacity is very roughly known. It is possible, therefore, to reach some sort of an estimate for total capital expenditure. It is reasonable to put the estimate on the low, rather than on the high, side, for much of the Government building of new plants will have been completed before the full supplies of material for the armed forces on the £3,000,000,000 a year basis are required. Let us assume, then, that the cost of depreciation and maintenance is £200,000,000, and that the total cost of Government factory extension and other constructional work, replacement of bombed property, and shipbuilding, is of the order of £300,000,000 a year. This would give a total of £500,000,000

a year, compared with £800,000,000 in peace-time.

The next essential activity is exporting. We rely to a tremendous extent upon our power to import: without imports the whole war effort would collapse. We can defend our trade routes, and we can carry the imports, but unless we can maintain some exports our financial power to import will be seriously weakened. We have tremendous resources of foreign investments which can be and are being mobilized, and we shall probably at a later stage in the war get useful credits. But from the immediate military point of view, maintenance of a good level of exports is essential. It is necessary to supply neutrals with at least some of the manufactured goods they need: if they cannot get supplies from us they will tend to move into the German periphery. Moreover, in wartime, as in all times of rising commodity prices, the terms of trade tend to move against us. Between 1914 and 1918, import prices rose by 164 per cent, while export prices rose by only 112 per cent. Consequently, it is necessary that an increasing volume of exports should be maintained in order to finance the same volume of imports. Again, much of our industrial structure is based upon exporting, and if we can maintain exports and get imports in exchange there will be less industrial diversion to be done. For example, the cotton industry is of only limited importance in supplying the armed forces and in satisfying the essential needs of the civil population. If exports cannot be maintained, then the cotton workers and factories will have to be diverted to other purposes. If on the other

hand exports of cotton goods can be maintained or increased, then the skilled workers and specialized plant are being used in the best possible manner for the war effort.

There is yet another strong reason why exports should be maintained as far as possible. Even in the heat of the war we must not forget post-war possibilities. In the last war we paid too little attention to them, and afterwards found that we had lost markets in all parts of the world. We should not make the same mistake twice, especially as it seems likely that there will be enough neutrals to take over any export connections which we may lose. Similarly, it would be undesirable to use up our foreign investments to a greater extent than we need. Their importance in the maintenance of the post-war standard of living has been exaggerated in some quarters, but it is tangible. While the war lasts, they are an invaluable financial asset, which we should not dissipate more than we need: after all, the war may last for ten years. On all scores, indeed, the case for regarding exports as essential to the war effort is overwhelming. But what proportion of our resources should we plan to use for export? This depends upon all sorts of factors, not the least of which is the extent to which foreigners will be able to buy them. In the last war, the volume of British exports fell by 55 per cent between 1914 and 1918. The 55 per cent reduction of volume was distributed fairly evenly over the trade. Food, drink and tobacco exports fell by 76 per cent, coal exports fell by 57 per cent, and exports of manufactured goods fell by

57 per cent also. The average was brought up by parcel-post, and by other raw materials. Exports of iron and steel¹ and machinery, of course, fell by much more than the average, and exports of cotton goods fell by less than the average.

In view of the heavy importing which we plan to do in this war, it would be unwise to allow exports to fall as far as they did before. Visible exports of £350,000,000 would represent a fall of one-third below the 1937 peak. To these must be added re-exports—which cannot be very great in wartime—and invisible exports. The fate of invisible exports is very difficult to foretell: in 1938 they totalled some £335,000,000, but would almost certainly fall substantially, especially if foreign investments were mobilized on a large scale, and if we used foreign shipping to a substantial extent. Suppose we take a figure of £600,000,000 for exports, re-exports and invisible exports. If imports were retained at £1,000,000,000—which would of course include war material as well as civil material—this would leave an adverse balance of £400,000,000 a year to be covered by sales of gold, sales of foreign investment, or credits from overseas. This is a very wide margin to be filled, and probably such a margin would be incompatible with the £1,000,000,000 import level. But the export figure might be greater, and it is perhaps reasonable to leave the £600,000,000 total.¹

¹ This whole question of foreign trade is discussed in detail in Chapter VI. It is mentioned here in order to give some idea of orders of magnitude.

The next use of resources which we must consider is the provision of public services. The cost of administration and public services which do not represent cash dispersals is £350,000,000. This cannot very easily be reduced. More and more public administration is being required. Education, public health administration, and local authorities' services must continue: to curtail them would be grotesquely near-sighted, for they represent a much more economic use of resources than people could possibly achieve by spending the money themselves. Moreover, in the reception areas a great increase of public services is required, to cope with the problems arising out of evacuation. No civil defence expenditure is included in this total, and civil defence, of course, covers a large proportion of local authorities' expenditure at the present time, but nevertheless the figure of £350,000,000 must be allowed to stand.

This concludes the whole of the essential services, apart from the consumption of the civil population. This must necessarily be a remainder item, after the demands of the war sector and the demands of the collective sections of the civil sector have been satisfied. The war sector is estimated to require £3,000,000,000 a year, capital expenditure will require £500,000,000, visible and invisible exports will require £600,000,000 and public services will require £350,000,000—a total of £4,450,000,000 a year. In the previous chapter, we found that the national resources totalled £7,250,000,000 a year, of which the national income accounted for £6,250,000,000 and imports for

£1,000,000,000. This suggests, therefore, that there will be a margin of £2,800,000,000 a year left for civil consumption, and the outlay of our resources is changed to something like this:

TABLE II
NATIONAL OUTLAY IN WAR AND PEACE

	£ millions	
	War	Peace
War sector	3,000	700
Civil consumption	2,800	4,500
Capital expenditure	500	800
Exports, visible and invisible	600	900
Public services	350	350
<hr/>		<hr/>
National income <i>plus</i> imports	7,250	7,250

The table requires some further explanation. If exports cannot be increased further, then imports might be reduced, and the consumption margin would be reduced accordingly. Moreover, the consumption estimate assumes that it is possible to achieve the change-over of resources without reducing the total national income. This again involves assumptions about smoothness of transfer, the ability of the Government to absorb the existing unemployed and to attract new workers to replace the men employed in the services, and about the productivity of man-power in the new regime compared with its productivity in the old. These questions will be discussed in further chapters, but it is important to note that they exist. The usual reservations about the accuracy of these war figures must be repeated at this stage.

But the table does show with reasonable definiteness the sort of reduction in consumption which will be necessary as the war proceeds. A reduction of 40 per cent below peace-time standards would bring consumption down to £2,700,000,000: a reduction of 35 per cent would bring it down to £2,925,000,000. It seems reasonable to assume that this must be something approaching the truth. Less reduction would be needed, of course, if the national income exceeded its peace-time maximum, if so many new workers were found, so much overtime worked, and such increase in productivity achieved that total output rose despite the withdrawal of workers for the armed and civil defence forces and the disorganization of air raids. But even if the national income at pre-war prices reached £7,000,000,000, compared with my figure of £6,250,000,000 and Mr. Clark's 1937 estimate of £5,734,000,000, a reduction in consumption of over 20 per cent. would be required. These sacrifices can be avoided only if the war effort fails to reach its maximum, if it has to be scaled down because of the nation's inability to produce the vast quantities of equipment which are needed for modern war.

CHAPTER THREE

CIVIL CONSUMPTION

WE HAVE seen that if expansion of the national income beyond its peace-time maximum is impossible, and if the war costs as much as we estimate—very much the same, in proportion to the national income, as the last war cost—then the civil population will have to accept a reduction of between 35 and 40 per cent in its spending as the war effort reaches its peak. On the most favourable assumption, the reduction cannot be less than 25 per cent, and it is easy to imagine circumstances in which consumption might fall by as much as one-half. This does not mean, of course, that incomes will necessarily be cut by this amount. It means that because of rationing, increased prices, poorer qualities, and shortage of luxury goods, the actual volume of goods and services consumed by the civil population must fall by this amount.¹

This is the point, of course, at which the cost of war is felt by the man-in-the-street, and this is the point at which wars are won and lost. Sane public policy is more necessary here than in any other section of the war effort. From the psychological standpoint, the extent of the reduction matters much less than the way

¹ Sacrifices imposed by lowering quality are often unnoticed. Those of buying margarine instead of butter, or a standardized overcoat instead of a tailored one, are obvious. But how many people realize, when they buy a 12-page *Daily Express*, that they are halving their pre-war consumption of newspaper output?

in which it is done: the people are willing to accept sacrifices in order to defeat Hitler, but they rightly insist that the sacrifices should be borne equally by the whole community, and they rightly object to being interfered with more than they need. Popular discontent comes from food queues coupled with obvious signs of profiteering, rather than from rationing and from compulsory reduction of the standard of life.

We must therefore start with the proposition that the burden must be shared equally by the whole community. This does not mean, however, that the same percentage cut must be applied to all. It is obviously ridiculous to suggest that a family on the poverty line should cut its consumption by between 35 and 40 per cent: it is equally ridiculous to suggest that a millionaire's family should cut its spending by as little as 40 per cent. If a cut of this size were imposed upon all families' spending, half of the population would be forced into starvation at once. Whatever its views about the sanctity of unequal distribution of income may be, therefore, the Government must necessarily take positive measures to reduce that inequality. The more equal the distribution of income and spending is, the better will public health and morale be maintained, and the bigger will be the outputs in the factories.

It is possible schematically to come to some sort of conclusions about the way in which this cut in total consumption should be distributed. Enough is known about the distribution of incomes and of consumption

(the two are not the same thing) to enable us to get some idea of the proper distribution of the cuts. In Table 1, we saw that the consumption of the "Under £250 a year" class in peace-time was £2,850,000,000, while that of the "Over £250 a year" class was £1,650,000,000. This division of the community at the £250 income level is of statistical rather than social significance. In no sense is it a clearly marked division between "rich" and "poor." But it gives a sensible schematic basis for analysis of this kind. Now according to Mr. Colin Clark's analysis,¹ one-tenth of the income-receivers are in the "Over £250" class and nine-tenths are in the "Under £250" class. If we assume that the proportion of consuming units to income-receivers is the same in the two groups—there is no evidence to suggest that the proportions are different on the average—then we find that the average consumption per head in the high-income group is five and a quarter times that of the low-income group. This is a schematic measure of the inequality of distribution of consumption in our peace-time society.

How far is it practicable for this inequality to be reduced in the course of the war? If absolute equality were reached, then an average reduction of 10 per cent in the consumption of the low-income group would be enough to give the total cut in consumption which is needed. But such drastic treatment of the high-income group is obviously out of the question. Redistribution of income as such is not an objective

¹ *N.I. & O.*, p. 109.

of the war, and the essential salariat of the war machine—the army of controllers, organizers, executives and so on—should not be required to sacrifice more than is absolutely necessary. Too great a reduction in standard of life below that to which they are accustomed would certainly diminish their zeal for efficiency. It is reasonable, however, to suggest that the inequality of consumption should be reduced by one-half, so that the average consumption per head of the “Over £250” group should be only two and five-eighths times that of the “Under £250” group. If this were done, then the reduction in total consumption would be achieved by a cut of 25 per cent in the consumption of the “Under £250” group, which would save £710,000,000, and a cut of 60 per cent in that of the “Over £250” group, which would save £990,000,000, thus giving the total required reduction in consumption of £1,700,000,000.

This is the order of magnitude of the reductions which will have to be made. It is important, however, to be clear about one point. This does not mean a flat cut of 25 per cent in the consumption of everyone in one group, and one of 60 per cent in the other. Within these groups, income is as unequally distributed as it is between the groups themselves. The sort of thing which this implies is a reduction varying between nothing and, say, 40 per cent in the lower-income group, and a reduction varying between 40 per cent and, say, 80 per cent in the higher-income group. It is hardly worth while to proceed further than that

with a schematic analysis of the incidence of the cuts on various income groups. The statistical material is hardly adequate, and in any case the analysis just completed shows clearly enough the sort of thing which will be required.

It may be noted² that the maximum peace-time consumption has been taken as the starting-point. To that procedure, certain objections will obviously be made. There is in wartime, it may be argued, a reduction in the number of consumers, for some millions of men are looked after by the armed forces and are no longer reckoned in civil consumption. This is, of course, true, but at the same time if the national income is to be maintained, and the level of consumption consequently maintained as far as possible, every man who leaves the civil machinery must be replaced either by a new worker who has not worked before, or by a man who was unemployed, or by an extension of hours worked by existing workers. In each of those cases, there is a replacement of the recruited man's consumption, for the new workers, the formerly unemployed workers and the overtime workers and their families will consume more. Thus the total demand for civil consumption goods will not fall to any appreciable extent, especially as the soldier's family receives allowances, and some of his pay is sent home, and he spends on consumption-goods when on leave. The difference, indeed, is not enough to make a major distortion of the figures which have been calculated.

The cut of between 35 and 40 per cent in civil

consumption therefore means, on reasonable assumptions, a reduction of something like 25 per cent in the standard of the "Under £250" class. Does this involve such a reduction in the standard of life as would seriously menace standards of nutrition and public health? No one is likely to under-estimate the seriousness of such a decline. The researches of the last five years show appallingly clearly that substantial sections of the population are even in the best peace-time conditions in shocking state of malnutrition and bad housing. But at the same time, we should bear in mind the fact that there has been quite a considerable advance in the standard of life of the working class in the last twenty years. This wartime reduction of standards will certainly for the duration of the war sacrifice the gains made since the last war, but it may be doubted whether the decline will be more devastating than that. The following table shows the movement of the real consumption per head of the working population in the pre-war period.

TABLE III

REAL CONSUMPTION OF THE "UNDER £250" GROUP

<i>Year</i>	<i>Consump- tion (£mill.)</i>	<i>Cost of living (1914=100)</i>	<i>Real con- sumption (1937=100)</i>	<i>Change in population (1937=100)</i>	<i>Real consump- tion per head (1937=100)</i>
1924	2,091	175	68.3	94.9	71.9
1929	2,291	164	80.0	96.6	82.8
1937	2,699	154	100.0	100.0	100.0

The consumption figures are those of Mr. Colin Clark¹:

¹ *N.I. & O.*, p. 252, and *E.J.*

the cost-of-living index is that of the Ministry of Labour. The last column tends to over-estimate the gains which have been made, for the age-distribution of the population has changed since 1924, and there were in 1937 more adult consuming-units per head of the population than there were in 1924. Allowance for this change increases the 1924 real consumption per head figure to 79·7, and that of 1929 to 88·0. But in wartime the age composition of the civil population would be changed somewhat, and the figures of the table are perhaps more apposite than the others. The suggestion is, therefore, that a reduction of 25 per cent would take the standard of life of the working population back to 1924 levels, but might not do much worse.

What would be the effect of this upon the nutritional standards of the people? Averaged over the whole range of "Under £250" people, the reduced consumption level would be equivalent to consumption of £1 per head per week, which, according to Sir John Orr's analysis in *Food, Health, and Income* in 1934, would allow sufficient expenditure upon food to provide a diet adequate in protein, fats and carbo-hydrates but deficient in certain important vitamins and minerals. This is as much as one could hope for in wartime in any case. This average, however, conceals the important point that 13·7 per cent¹ of the people have consumption of less than 10s. per head per week—considered by Sir John Orr as being "inadequate for perfect health in all the constituents considered" and 16·9 per cent

¹ Clark, *N.I. & O.*, p. 113.

have between 10s. and 15s. per head per week, which "is adequate only in total proteins and total fat." Moreover, 52 per cent of the children are in these two categories. Consequently, without considerable redistribution even within the "Under £250 group," the wartime reductions represent malnutrition of the worst kind, especially for the children.

More up-to-date than Sir John Orr's analysis is a research project undertaken by the University of Bristol in 1937.¹ In this investigation a minimum standard was calculated, on the basis of nutritional requirements at 1937 prices in Bristol, in which allowance was made for rent, clothes, transport, and so on. Families were divided into four classes—poverty, insufficiency, sufficiency, and comfort. The survey showed that 11 per cent of families were in the poverty group, 21 per cent were in the insufficient group, 56 per cent had sufficient income for ordinary living, and 12 per cent were in the comfortable group. Enough particulars are given in the published results of the survey to show that if those in the "comfortable" group were reduced to "sufficient" and that if those in the "sufficient" were reduced to "insufficient," then there would be a reduction of $27\frac{1}{2}$ per cent in the total consumption of the working-class of Bristol. Bristol is more prosperous than the country as a whole, and to that extent the survey is not representative of national conditions. But it seems reasonable to suppose that if the reduction of 25 per cent in the consumption of the "Under £250"

¹ *The Standard of Living in Bristol*, Arrowsmith, 1938.

class were distributed in such a way that the people in poverty conditions were unaffected, and the people who, in the terms of the Bristol investigation, "are of scanty means, but not in poverty, which have a struggle to make ends meet" were affected very little, the implication would be a reduction in the standards of the "comfortable families with a margin for holidays, savings, and luxuries" to the "sufficiency" level, and a reduction of those on the sufficiency level to that of insufficiency and struggle. That appears to be the implication for working-class standards generally in this wartime reduction of consumption. It would not bring about general and widespread poverty in the technical sense of the term, but it would wipe out working-class luxuries and would reduce millions of families which are now on a tolerably sufficient standard of life to a condition of struggle to make ends meet.

The same considerations apply to the lower ranges of the "Over £250" group. Here, again, the wartime reduction of consumption would involve elimination of luxuries and a standard of life which was just tenable. And in the upper ranges, in which according to our schematic schedule the proportions of reduction of consumption rise up to 80 per cent, there will have to be a very drastic scaling-down of luxuries of every kind, and a complete revision of the pre-war standard of life. That is what the war means in terms of the lowering of the standard of life of the civil population. By no means the least awful consequence of the war is the temporary

destruction of the work which has been done by trade unions, by social workers, by local authorities, and by efficient industries and improved industrial technique to build up the nation's living standards to a proper level. It is a matter for gratification that in this country, unlike Germany, a sufficient margin of non-essential consumption exists to enable these economies to be made without driving the population into destitution and poverty and malnutrition on a monumental scale.

What industrial resources, in detail, will be released by this reduction in consumption, and what does the reduction mean in positive terms of commodities? We can get a good general idea of this by analysing the peace-time consumption figures. The ground has been covered very comprehensively by Mr. A. E. Feavear-year¹ and Mr. Colin Clark,² and their estimates have been brought up to 1937 by the Statistical Department of the London Press Exchange.³ The latter's total of consumption for 1937 is £4,420,000,000, compared with Mr. Clark's figure of £4,331,000,000. These figures are both slightly smaller than the £4,500,000,000 which is being used in these estimates as the consumption in a peace-time year of full employment. The London Press Exchange's estimates, grouped in the manner which is most suitable for this purpose, for the year 1937, are as follows:

¹ *Economic Journal*, March 1934.

² *N.I. & O.*, pp. 149 *et seq.*

³ *The Home Market*, 1939 edition.

CIVIL CONSUMPTION

TABLE IV
CIVIL CONSUMPTION, 1937

	£ millions	Per cent of total	Suggested % reduction
Necessities	2,895	65·3	27
Food	1,360	30·6	20
Rent, rates, repairs, mortgages	620	14·0	33½
Clothing*	448	10·1	40
Fuel, light, water	180	4·1	25
Tobacco	160	3·5	20
Household expenses†	127	2·9	25
Rail, Tram and Bus Travel	170	3·9	30
Drink	260	5·9	35
Luxuries	1,095	24·9	70
Furniture and hardware	193	4·4	75
Entertainment and sport‡	254	5·8	60
Domestic service and laundry	190	4·3	70
Drugs and fancy goods	148	3·4	75
Motor-car and cycle§	125	2·8	70
Miscellaneous	185	4·2	70
Total	4,420	100·0	38

* Includes soft furnishings.

† Soap, matches, stationery, newspapers, stamps.

‡ Includes hotel and restaurant.

§ Includes petrol, oil, garaging, insurance.

The definitions of "necessity" and "luxury" in the above classification should not be misconstrued: in the items in the "necessities" list there is a tremendous amount of luxury spending, and in the items in the "luxury" list there is a considerable amount of spending which could be more realistically described as "necessity." It is impossible, however, to segregate the one type from the other in the retail sales returns, and the general classification in the table corresponds to common sense. Tobacco is classed as a necessity in wartime: drink is not a necessity in the same sense, and really requires to be treated in a category to itself. Apart from these points, the meaning of the first two columns in the table is plain.

It is necessary to reduce the total by 38 per cent. Where will the reductions be made? If we were dealing with peace-time conditions, we could make reasoned estimates. Enough is known of relative urgencies of demand for goods and services to enable us to estimate the way in which people would dispense with them if their incomes were reduced. But in war conditions, the whole structure of demand is changed. The extent to which goods represent imported material, the extent to which their manufacturing facilities are required for the arms programme, the extent to which conspicuous luxuries must be curtailed for the maintenance of public morale, the loss of opportunity for certain types of spending, even if purchasing power is available—all these are unknown but vital influences which make nonsense of estimation on the basis of peace-time

demand schedules. We can only make subjective guesses of what is likely to happen.

The percentages in the third column of the table show one way in which the required reduction could be carried out, consistently with the earlier suggestions about the distribution of the burden among various sections of the population. The 27 per cent reduction in "necessities" would, of course, fall primarily upon the luxury element in those necessities: a 20 per cent reduction in expenditure on food does not mean that everyone has 20 per cent less bread, meat, sugar, and milk. Nor does it necessarily mean a very great reduction in the clothing standards of the poor, although clothing is probably the item in working-class budgets which would suffer most. Rents represent rather a different problem: it is quite clear that something will have to be done to relieve the public of the awful burden of rent during the war. In a time of hardship, the landlords will have to make some sacrifice. This could be done by decree, reducing pre-war rents by a given proportion, or, of course, it could be done by general price inflation coupled with rent restriction. The same applies to the burden of building society payments, which may well have been within the tenants' means in peace-time conditions, but which in time of dislocation cannot be maintained. Something will in any case have to be done to alleviate the problem of rent for the families of those who join the forces, and action in that direction should be coupled with action to cope with the rent problem generally.

The 30 per cent cut in rail, tram, and bus travel is intended primarily to check semi-luxury travel. People will still have to go to work by rail, tram, and bus. But the services will be curtailed—in fact are curtailed—and a tendency is already appearing for people to bicycle to work more and more. The railways are already occupied with military transport, direct and indirect: the buses use imported fuel and may be commandeered for army transport. It is not unreasonable to suggest a reduction of 30 per cent. As for drink, some folk will no doubt say that the cut should be 100 per cent, and in the last war many sound judges were converted, for the duration, to prohibition. At a time when heavy industry must work overtime, however, and when nights are compulsorily black and gloomy, it seems that drink does meet a social need. It also supplies a very useful budgetary need. Increased taxation and further development on the lines of the Carlisle scheme seems to be the best policy, and the suggested reduction is 35 per cent.

In the luxury sections of the nation's spending, there must obviously be drastic cuts. Entertainment and sport, the largest item, has been cut least: its value for public morale is obviously immense. Sufficient is left, after the cut, to maintain about two-thirds of the peace-time cinema and theatre attendance, one-half of the hotel and restaurant expenditure, and substantial purchases of sporting equipment. It is assumed that the betting industry will not be working in war-time on an organized scale, and that will release a

great deal of purchasing power for other entertainment. The cuts in furniture and hardware and drugs and fancy goods are straightforward. A relatively small cut has been made in the motor-car and cycle item, because there will be more cycling, and although the use of cars is restricted, owners will still garage them for the duration. The last item is domestic service and laundry, which must evidently be cut drastically. The domestic workers are an important part of the labour reserve which can be used to better effect in munition works, and in any case their employers will have to cut down their expenses. In the normal way, one would be inclined to suggest a larger cut, but one result of the war effort will be an increase in the number of married women at work, and that will necessitate employment of domestic help and the maintained use of laundries. Thus, in the luxury consumption trades as a whole, a reduction of some 70 per cent is indicated.

This figuring may look somewhat arbitrary, and it is of course little better than guesswork. No one can say in advance what the consumption structure will look like after a year or eighteen months of war. But the actual range of possibilities, consistent with the reduction in total consumption by between 35 and 40 per cent, and with the spreading of the burden over the population in the manner suggested, is not as great as might be thought. Anyone who doubts this may work out the figures for himself, using his own ideas of the relative importance of goods and services, and his own idea of the way in which the various classes spend their

money. If he starts with the fact that 37 per cent of total consumption is consumed by the "Over £250" class, and with the hypothesis that this must be reduced by 60 per cent while that of the "Under £250" class must be reduced by 25 per cent, he will find that his detailed answers for the reductions in individual commodities and services will be much the same as these. While this analysis was being prepared, the data were submitted to a colleague, who independently arrived at very similar conclusions from them. Obviously it is necessary in any case to make some sort of estimate, in order to get some idea of the kind of resources which will be released for the war sector of the economy.

How can these reductions be achieved in practice? There are two ways of doing it. The first is to allow prices to increase, so that the reduction in real consumption will be achieved on *laissez-faire* lines, those people who have the purchasing power continuing to buy, and those who have not going without. This at once sets up the inflationary spiral of rising prices and rising wages and profiteering and all the rest of it. Within the working class, those who happen to be in a good bargaining position—primarily the munitions workers—maintain their pre-war standard of life and even increase it, while those who are not, especially the dependants of soldiers, starve. Within the well-to-do class, the salary-earner and the holder of fixed-interest securities suffer tremendous reductions in their effective purchasing power, while the holder of industrial shares does very well indeed. This method achieves

the reduction of consumption, but it distributes it very arbitrarily and unsatisfactorily. On the whole, with some amendment, it was the method adopted in the last war. The other method, of course, is for the Government to plan the reduction in consumption, in order to make sure that it is distributed fairly among the community. It is obviously impossible to plan the whole industrial field: but it is possible to plan the essential sections of it, and by Government action to ensure that the consumption structure is adapted broadly according to plan.

The need for planning is greatest, as we have seen, in the "necessities" section. Without it, those sections of the community which are now living in poverty or near it will starve. For food, in particular, there must be intensive planning. A way must be found of ensuring that everyone gets a fair share of what food there is. We already have a limited rationing scheme, of course, but ability to consume the ration still depends upon purchasing power. If a family has no money, it cannot get its ration. Such a scheme is manifestly better than nothing. But surely it would be better still to provide people's needs of essential foods free of charge as a public service, the scheme to be financed by a tax on earnings. The ration card would be stamped every week by the employer, like an insurance card, according to the employee's earnings in the week, and the fixed proportion of his earnings would be deducted at source. The retailer would then supply the goods in exchange for the stamped counterfoil. The effect of

this would be, of course, that some families would be getting their essential foods below cost, whereas better-off families would have to pay more than the foods were worth—and that is precisely the objective in wartime, to distribute according to need rather than according to purchasing power. We should then know that every citizen was getting a reasonable amount of essential food. Moreover, as half the nation's children are in the very-low-income groups, which will be hardest pressed in wartime, we should know that the children were being fed. There are all sorts of administrative difficulties. The provision that different earnings would require different numbers of stamps on the cards, for example, presents all sorts of problems. But the United States social security contributions are levied according to earnings, and what is possible for American administrators should be possible for British, too. There are obvious dangers of evasion—there might be a black market in the rationed foods. But this danger could be avoided, especially in wartime. The benefits derived from the scheme are so great that the purely administrative difficulties are surely soluble. The scheme¹ could be tried first for a limited number of foods—say, bread, meat and fats—and could then be expanded to cover other essential foods, and even certain items of clothing. Once the tax system was working, its rates could easily be raised. There is something to be said, in any case, for such a tax on incomes and earnings in wartime, and if that were

¹ The finance of this is dealt with in Chapter VII.

imposed, then food distribution could be met from the Budget in the ordinary way.

One can visualize a position, indeed, in which there would be four scheduled types of food. The first would be the essential needs, distributed free; the second would be other necessities, which would be rationed in the ordinary way; the third would be semi-luxury foods, such as coffee, which would be available for those who had purchasing power to buy them, and the fourth would be luxury foods which would be subject to very heavy Excise taxation or even prohibition. If we look at the problem in this way, the prospect of achieving a planned and well-distributed reduction of some 20 per cent in food consumption appears to be very reasonable and sensible. Of all the items of national consumption, food is the easiest to manage in wartime conditions. Tobacco—which in many ways is akin to food—would come in the third category, subject of course to increased taxation. The existence of a large number of non-smokers makes it rather unsuitable for rationing. Fuel and light are being rationed, and will obviously continue to be so.

Rent we have already dealt with. If there is to be no price inflation, then some reduction by decree must be necessary. This is part, however, of the much wider problem of how people's fixed liabilities should be dealt with in the hectic change and chaos of wartime. As for clothing, much of the 40 per cent reduction represents cuts in luxury clothes of various kinds—including, of course, imports. But it is obviously necessary to keep the

population as well clothed as possible, and there are real potentialities in the idea which was tried in the last war of standard civilian clothes and boots. A rise in clothing prices is already in progress, and as part of the industry's capacity is commandeered for the supply of the armed forces, there does not seem to be any fourth alternative to further price increase, rationing or standardization. This is one of the most difficult items of consumption to curtail in a planned manner: consumption will assuredly be curtailed, but standardization seems to be the only way to curtail it without throwing the whole burden of curtailment on those who cannot afford it.

The reduction in rail, bus, and tram travel has been dealt with earlier, and so has the reduction in drink. It is fairly easy to plan both of these, simply by limiting facilities for consuming them. The same applies, in the luxury class, to spending on motoring. As for the other "luxuries," there can be no rationing, for obvious reasons, and the fall in consumption will have to be secured by the combination of limitation of facilities and limitation of purchasing power. The furniture and hardware trades are of some importance to the arms programme, and plant and workers will no doubt be drawn from them to the arms sector: domestic servants will be drawn away to work in munitions factories, and domestic service will increasingly become daily charring for those married women who are doing national service all day: expenditure on entertainments, hotels, and restaurants can be limited by decree,

for the hours at which entertainment places can be open and the services available at hotel and restaurant can be controlled and limited, and there can in addition be increased Excise taxation. It is very difficult positively to plan these things, and it is not altogether desirable in any case. But Excise duties, prohibitions, and the drafting of workers away to the arms sector (together, of course, with general taxation policy) should enable the Government to ensure that luxury is reduced to the desired extent.

The general set-up of consumption in wartime therefore becomes reasonably clear. Great declines are inevitable, and it is the duty of the Government to ensure that their burden is smoothly distributed. This is done best by free distribution of essential foods according to need, and rationing of necessary foods, fuel, and light, coupled with decreed reduction of fixed interest obligations and standardization of clothing. Luxury and semi-luxury expenditure could be reduced by direct prohibition of conspicuous luxuries and by strong Excise taxation: it would in any case be affected by the general reduction in effective demand for such luxuries and by the withdrawal of labour and capital from those services into the arms sector. The war will require a 70 per cent reduction in luxury expenditure and a reduction of between 25 and 30 per cent in the national consumption of those items which are regarded as "necessaries." It means a drastic lowering of the standard of life of the well-to-do, a lowering of the "comfortable" artisan and small salariat to a condition

of "sufficiency," and of those who are now on a "sufficient" standard to a condition of struggle. But there is not the slightest evidence that war will lead to real impoverishment of the whole population, as it led to impoverishment of the populations of the Central Powers in the last war, or as it is leading to the impoverishment of Nazi Germany to-day.

CHAPTER FOUR

THE NATION'S MAN-POWER

THE ESTIMATES which have been made so far rest upon one fundamental assumption. They assume that the national income can be maintained, that even although millions of men may be withdrawn from economic activity, the total level of output can be kept at the peace-time maximum. Is this assumption realistic, and, as a corollary, are not the estimates too optimistic? At bottom, this depends upon the supply of man-power. There are other limitations upon output—the extent of industrial equipment, the ability of our shipping to carry the necessary imports of food-stuffs and raw materials, and the ability of industrial management to cope with the new conditions. But intrinsically the scarce factor of production is labour, and upon the size and skill of the labour force depends the economic achievement.

The next step in the argument, therefore, is to consider the available and potentially available labour force, and to analyse the nation's man-power. Towards the end of a decade, that is rather a difficult thing to do. For Census years, all the necessary facts are available, but for the intervening period we are only able to make estimates from whatever information there is. That is why the first thing the Government has done has been to prepare a National Register, in order to get up-to-date information about man-power. The

unemployment insurance statistics, of course, make our knowledge far better than it was in 1914, but they cover only about two-thirds of the occupied population. Even now that they include agricultural workers, they contain many gaps which prevent us from finding out really what is going on. However, an estimate must be made. The process of making it is rather a complicated one, and readers who are not statistically minded would perhaps do well to skip a little, noting the tables as they go.

The first step is to discover the size of the occupied population. The 1931 Census defines "occupied" people as people who receive pay for working, and it includes people who happen to be unemployed at the time of the count. The main classes of unoccupied people are married women, students, old people, chronically ill people, and people living on investment income. These figures for 1931 must be brought up to date. The annual Statistical Review issued by the Registrar-General gives an estimate of the population of Great Britain at mid-1937, distributed according to age and sex in quinquennial age groups. This gives the total population aged fifteen and over, and the Ministry of Labour has given the number of boys and girls aged fourteen, so we have the total population aged fourteen and over in 1937 at 36,574,000, an increase of 1,912,000 compared with 1931. How many of these are occupied? We assume that for each sex and age-group the proportion of population which is occupied is the same as it was in 1931. We assume, for example, that 98·5

per cent of the males in the 25-34 age-group are occupied, and 35·7 per cent of the females. This is an eminently reasonable assumption. At neither end of the age-register has there been any striking change: there has been no major change in the school-leaving age or in pensionable ages.* In the middle-age-groups there has been no big change in the propensity of married women to seek paid work. The standard of life has risen, so there has probably been some tendency for children to enter the economic system later and old people to leave it earlier, and the alteration of the unemployment insurance scheme in the autumn of 1931 probably removed some married women from "occupation" as it removed them from insurance benefits. So an estimate of occupied population calculated in this way will err on the high side rather than on the low. But the margin of error cannot be very great. The estimated total of occupied population, fourteen years of age and over, is 21,921,000—an increase of 866,000. It is interesting to observe that the increase in the number occupied since 1931 is less than one-half of that of the total population of fourteen and over. The reason, of course, is that the population has aged since 1931, and the proportion occupied falls as the age increases. The proportion of women occupied, for example, falls from 35·7 per cent in the 25-34 age-group, through 20·9 per cent in the 45-54 age-group, to 8·2 per cent in the sixty-five and over age-group. The following table shows the occupied population in age-groups:

TABLE V

OCCUPIED POPULATION, 1937

<i>Age-group</i>	<i>Males</i> (<i>'000</i>)	<i>Females</i> (<i>'000</i>)	<i>Total</i> (<i>'000</i>)
14-24	3,681	2,768	6,449
25-34	3,650	1,400	5,050
35-44	3,025	851	3,876
45-54	2,500	640	3,140
55-64	1,980	446	2,426
65 and over	800	180	980
Total, 14 and over	15,636	6,285	21,921
Unoccupied	1,696	12,957	14,653
Population, 14 and over	17,332	19,242	36,574

The total occupied population is increasing, and will continue to increase during the next few years. At present the rate of increase is something like 100,000 a year, so that in mid-1939 it is likely that the occupied population was about 22,120,000. During the next years, however, the rate of increase will fall. For the duration of the war, we may rely upon an increasing occupied population, but the rate of increase will be less than it has been since 1931.

During the war, on the assumptions we have made earlier about the size of the armed forces which will be required, it will be necessary to withdraw between 2,500,000 and 3,000,000 men from the industrial system in order to serve in the forces. This figure represents the increase which would be required in army, navy, air force, and civil defence over and above the regular peace-time strength on the eve of the war.

A large number of these men, of course, have already been withdrawn—territorials, reservists, militiamen, and full-time men and women for civil defence. Are there “unoccupied” labour resources available to take their places? In the last war, the home occupied population was not maintained. Between August 1914 and November 1918, according to the rather nebulous statistics of the time, there was a fall of 780,000 in the total volume of employment. But the number of men and boys in employment fell by 2,440,000, and there was an increase of 1,660,000 in the number of women and girls employed. Thus, more than two-thirds of the loss of men and boys was made good by the incursion of female labour. To a great extent, the increase in female employment was probably “statistical” rather than real: the figures of the time did not count domestic workers as “employment,” and consequently the increase of 1,660,000 probably represented to some extent transfer from other occupations. But at the same time, it is certain that many women who had never worked at all in the Census meaning came into employment. Are there similar resources available in 1939, and how large are they?

It is obvious that the available reserve is rather less than it was in 1914, for a larger proportion of women and girls are employed already. The proportion occupied in the 25-44 age-group in 1937 was 30·5 per cent, compared with 29·2 per cent in 1911. But this slight difference in proportion is not as great as one would have expected, and emphasizes the conclusion

that the change effected by the last war was a change in the type of work done by women rather than in the quantity. And the difference in proportion is adequately compensated by the growth of absolute number. It is obviously impossible to say precisely how many of the unoccupied could be brought into the industrial system: this depends upon all sorts of considerations of health, numbers of young children, and so on. If 85 per cent of the single women, 60 per cent of the widows, and 30 per cent of the married women between the ages of sixteen and sixty-four were "occupied," that would represent an increase in the occupied population of nearly 2,700,000. This would increase the occupied proportion from 35·3 per cent in those age-groups to slightly over one-half. These may probably be the dimensions of reserve of female labour available, and the more experiments the Government can undertake in collective feeding and provision of daytime crèches for young children, the greater that reserve will be. The evacuation of school-children obviously releases married women in the towns for work, and is a positive gain therefore—the country-women who look after those children would not be available for industrial work in any case, for the distances to factories would be too great.

There is also the possibility of retaining more old people at work. At the present time, 47·9 per cent of men over the age of sixty-five are "occupied," and only 8·2 per cent of the women. These now form a very substantial part of the population—there are 3,871,000

of them, or 8.4 per cent of the whole population. The number occupied is 980,000. The proportion occupied tends to fall as time passes. Even if the proportion was increased to that of 1911, another 250,000 would be brought into the industrial system, and their output would be by no means negligible. Many of the old people, of course, are physically past the age for work of any kind. Many others can do their bit by looking after the children and the house when the mother is out working. But there must be many who have been loth to leave employment, and who would welcome an opportunity to get back again. The Prime Minister himself is seventy, and on both sides of the House of Commons men over sixty-five make a useful contribution. There is no reason whatever why substantial numbers of men and women over that age should not be brought back again into occupation. The same applies of course, to the considerable number of unoccupied men and women between the ages of sixty and sixty-four. Bad health prevents many from working, but inability to secure employment prevents more.

At the other end of the age-register, it will no doubt be argued in some quarters that we could increase our labour resources by limiting education facilities. It is greatly to be hoped, however, that no one in authority will listen to such arguments. Apart altogether from the long-term consideration that we must pay attention to post-war requirements, the economic case is greatly against such curtailment. What we shall require in the war is a tremendous supply of skilled

workers and administrators and technicians. For that reason, we must increase rather than decrease the amount of higher education provided, and we must certainly increase the amount of technical education provided. Towards the end of a long war, the boys and girls who are now thirteen, fourteen, and fifteen will be playing an important part, and young technicians of eighteen and nineteen will be among the skilled staff upon which we rely to win the war. The Nazis, by their peace-time emphasis upon war service and compulsory labour service, have already weakened their potential for a long war. Between 1931 and 1935, there was a decline of 22 per cent in the number of students matriculating, and the number of students in technical high schools fell by 50 per cent.¹ It is more education, not less, that we need in order to win the war. So let there be no talk of increasing our output by setting boys and girls to work before their time.

There are further possible resources in the work of those who are blind and crippled. Such work has a valuable psychological effect, and could have a valuable economic effect if it were carefully and intelligently organized. Anyone who is familiar with the work which has been done by the blind, under the auspices of the London County Council, can see their potentialities for providing some of the things for the production

¹ *Frankfurter Zeitung*, October 3, 1937, quoted by Sternberg, *op. cit.*, pp. 262-5. The 1938 *Statistisches Jahrbuch* reveals a reduction from 20,431 in 1932 to 9,554 in 1937-38.

of which the nation cannot afford to use labour which can be used for the war sector and the essential civil sector.

On the whole, therefore, we can say with some assurance that substantial unoccupied resources are available in this country, and that properly organized they should be adequate to fill the places of those men and women who must serve in the defence forces. There is one qualification which must be made to this. It is possible that the volume of casualties from air-raids will be so great that it will be manifestly impracticable to maintain output. In that case, of course, the effective strength of the war effort would inevitably be weakened; either the civil standard of life or the military effort would have to be sacrificed. However, the enemy would presumably be suffering equally great casualties, so that the balance of forces would not be impaired. Subject to these unpredictables, however, there is no reason to believe that the size of the labour force at home should be seriously reduced by the withdrawal of men for the forces. And the process of absorbing new workers would be greatly eased by the existence of organizations for collective feeding and care of children, and by any measures which would be taken to reduce the amount of individual domestic work which women are compelled to do.

There are, of course, further possibilities of increasing output besides those of increasing the occupied population. There is the possibility, first, of an increase in general productivity, by an increase in the intensity

of work, and second, of an increase in productivity if the change in the occupations of the community leads away from the occupations with low productivity and towards those occupations with high productivity. There are further possibilities of increasing output per worker by better industrial organization, both on what one may call the capitalist side, by standardizing products and so-forth and also on the labour side by more economical use of skilled labour. There is no doubt at all that general productivity can be increased. Longer hours could certainly be worked in the stress of war. There is less reserve here than there might have been. After the great reduction in hours in 1919 when the hours of industrial, transport and agricultural workers were reduced on the average by about six hours a week, there was no further improvement. But in 1935, according to tables prepared by Mr. G. L. Schwartz and Mr. E. C. Rhodes¹ on the basis of Ministry of Labour investigations, the median hours actually worked throughout industry were 48·2: in one-quarter of the two hundred and thirty-one industries analysed, the hours worked exceeded 49·1, and in one-quarter they fell below 46·8. It is likely that at the outbreak of war the number of hours worked was substantially higher than this: throughout the arms sector, extensive overtime was being worked. It seems reasonable to expect that in wartime it will be possible to increase the average, say, to fifty-four. Some adjustment must be made for increased holidays, but a ten

¹ *London and Cambridge Economic Service Memorandum*, No. 75, 1938.

per cent increase in annual working time should be attained. In Germany, it may be added, hours are already far exceeding this level, and in certain industries such as coal-mining, they have been forced up to something like the limit of human capacity. We can fairly rely upon some increase of productivity, therefore. At the same time, there is a great "voluntary" extension of hours actually in progress. Women who are working in the daytime and are doing what domestic work they can in the evening are in reality voluntarily increasing their hours of labour. All sorts of people are doing work of national importance, paid and unpaid, in their spare time, and are consequently increasing the national effort and to the extent that they are paid increase the national income.

Next, how will the productivity of the war economy compare with that of the peace-time economy? Evidently if the war industries are industries in which output per worker is greater than it is in the non-essential industries, there will be a net increase of productivity as workers move into them. This is a good point for consideration of the occupations of the occupied population. What do the British people do? We know with some degree of accuracy what they did in 1931, the Census year, and we bridge the gap to 1938 by use of the unemployment statistics. The method is complicated. The Census returns of the industries in which people are occupied classify people into "operatives in work," "employers and managers and persons working on their own account" and "out of work."

To build up the total of the occupied population for 1931, of course, we add all these. The major movement since 1931 is revealed by the movement in the number of insured workers in each industry. But the number of insured workers in industry is by no means the same thing as the number of occupied workers of fourteen and over in the Census. Juveniles of fourteen and fifteen, and aged of sixty-five and over are excluded from the insurance statistics. So are people with salaries of more than £250 a year. So are, in general, "employers and managers and persons working on their own account." Moreover, in a large section of the economic life there is no unemployment insurance, or was not in 1931. At that time, of the 21,055,000 occupied persons, in Great Britain, only 12,500,000 were insured. Between 1931 and 1938 there was a great increase in the number of insured workers, but there is some reason to believe that this represented in part a movement away from uninsured activities into insured. Agricultural labourers and domestic workers joined insured industries: small shopkeepers were taken over by chain stores, becoming insured workers, and so on. If we apply the percentage increase in the number of insured persons to the number of occupied persons in 1931, we get an occupied population in 1938 far in excess of the real one.

The method adopted in building up the following table is as follows. For agriculture and fisheries and railway transport, there is an annual count of workers independent of the unemployment insurance statistics.

The proportionate decrease since 1931 is applied to the Census return of occupied persons in those industries. For the sections of the national economy which are fully covered by unemployment statistics—mining, manufacturing industry, building and contracting, public utilities, and transport and communications other than railway—the percentage increase in the number of insured workers since 1931 is applied to the Census returns of “operatives in work” and “out of work,” and the 1931 total of “employers and managers and persons working on their own account” is added. The movement in the rest of the national economy—the services in which there has been most substitution of insured workers for individual entrepreneurs and uninsured workers—is then calculated by difference, the occupied population being known to be some 970,000 greater in 1938 than it was in 1931. This method probably over-estimates to some extent the expansion in industry and building, and under-estimates the expansion in the services, but the errors involved will not be very serious. The results appear in the table on the following page.

It will be interesting to compare the results suggested by this table with the results of the National Register as and when they are made public. Since 1931, it seems that the expansion of manufacturing industry and building has absorbed all the workers lost by agriculture and mining, and nearly one-third of the new workers as well. The expansion in road transport has been offset by the reduction of employment in railways,

TABLE VI

INDUSTRIAL DISTRIBUTION OF OCCUPIED POPULATION

<i>Industry or service</i>	<i>Occupied popn., 1931 (‘000)</i>	<i>Est. occu- pied, 1938 (‘000)</i>	<i>Est. change, 1931-38 (‘000)</i>	<i>Percentage unemployed July 1939</i>	<i>Net out- put per head (£)</i>
National defence	250	360	+ 110	—	—
Agriculture and fishing	1,260	1,060	- 200	4.4	135†
Mining and quarrying	1,280	1,070	- 210	11.5	162†
Manufacturing industry	7,070	7,510	+ 440	7.5	229†
Building and contracting	1,120	1,340	+ 220	15.7	199†
Gas, water, electricity	240	310	+ 70	6.3	435†
Railway transport	560	550	- 10	5.1*	216†
Other transport and communications	890	900	+ 10	11.5	140†
Distribution, administration, domestic and services	8,380	8,920	+ 540	8.0*	
	21,050	22,020	+ 970		

* Unemployment insurance figures cover about one-quarter of railway workers and half service workers.

† 1934 figures, Clark, *N.I. & O.*, p. 238.

† 1935 figures.

docking, and shipping. The service trades have expanded fast, and have absorbed more than one-half of the new workers.

The figures of net output per head—the best measure of industrial productivity that we have—are rather out-of-date, for they refer only to 1934 and 1935. Since then, there has certainly been a big increase in output per head in manufacturing industry and in agriculture and probably also in mining. In the “services” sector of the economy, the increase has probably been less marked. These are more individualized activities, and there is much less opportunity for technical advance. Mechanization of public administration, and the squeezing-out of the small shopkeeper have probably increased general productivity, but it is likely that the differences shown in the table have become more striking, rather than less. In wartime, the national effort becomes increasingly diverted towards national defence, agriculture, mining, manufacturing industry, public utilities and rail transport, and the biggest reductions will be seen in the “service” groups. All over the world, the increase in the standard of life has resulted in growth of the proportionate importance of services, and when the standard of life is reduced, as it is in wartime, the service trades must necessarily be contracted first. It is interesting to see, however, that this process will tend to increase, rather than to diminish, industrial productivity as a whole. Apart from agriculture and mining (which probably showed much larger outputs

per head in 1939 than they did in 1934-35, and so have higher relative productivity than appears in the table, the activities which are expanded are those with high productivity. Within industry itself, the metal-working industries are neither more nor less productive than is industry as a whole. But the chemical industry has a greater productivity than any other, and it is expanded in wartime, and the food, drink and tobacco industries, which are contracted least of the civil industries, have a particularly high level of productivity too. We can reasonably say, therefore, that the change to a war economy should not reduce the average productivity of the economic system as a whole. It should in fact increase it.

Lastly, in this survey of the nation's man-power, there is the very numerous class which is "occupied" but not "employed." In July 1939—the August figures are less useful, for they are distorted by holidays and by the first instalment of conscription—there were in Great Britain 1,240,000 unemployed in the insured trades, between the ages of sixteen and sixty-four. There were 12,000 unemployed boys and girls aged fourteen and fifteen, and there were probably as many as 300,000 people who were unemployed outside the scope of the unemployment insurance scheme¹—between 1,500,000 and 1,600,000 in all. Since war was

¹ This is calculated from unemployment percentages in industries applied to people in those industries outside the scheme, and is verified by the orders of magnitude of "invisible" unemployment discovered by Clark, *N.I. & O.*, p. 31.

declared, of course, this number has been swollen by the summary dismissal of thousands of workers in non-essential trades. But we are working on pre-war figures, and will ignore them for the present. The basic pre-war fact was that there were 1,500,000-1,600,000 unemployed, the equivalent of some 7 per cent of the occupied population. These workers, set to work with average productivity, could increase total output by 7.6 per cent. Our failure to employ these men and women in peace-time prevented the national re-armament effort from advancing as fast as it might and should have done, and it would be ridiculous folly to leave them unemployed now. They represent a reserve of man-power which should evidently be exploited first of all. The question *how* they should be re-employed is dealt with in a later chapter. But it is abundantly clear that they must be re-employed.

At the same time, we must not forget that even in wartime it is impossible for everybody to be working all the time. There must always be some unemployment, for at any given moment there must always be some people going from job to job, and although seasonal movements of production are to a great extent smoothed out in a general restriction of consumption, they must always be significant in trades such as building and agriculture. How large must this unemployment be? In July 1939, in a period of very rapidly rising employment, of the 1,143,333 men and women who applied for unemployment benefit, as many as 506,400, or 44.3 per cent, had registered themselves as

unemployed for less than six weeks. It is reasonable to assume that the vast majority of them were in process of changing jobs. If each of these people is out of work for only a fortnight, then 20,000 man-years' employment is lost, or, in the case of industrial workers, nearly £5,000,000 of net output. Obviously the nation cannot afford this. The Government stopped skilled workers in key industries from moving in the early weeks of the war through the Control of Employment Act. This was aimed, however, primarily at preventing employers from "poaching" key men from each other at fancy wages. It is also necessary generally to restrict moving from job to job as far as possible. That would involve, incidentally, equalization of labour conditions between plants, for otherwise it would prevent workers from moving away from a bad employer to a good one, and such prevention would rightly be regarded by the trade unions as a virtual subsidy to the bad employer. But this could be done in wartime, and it should be possible to reduce the number of short-term unemployed by one-half, say to 250,000.

The seasonal workers and occupations present rather a problem. The best estimate there is suggests that over the year as a whole, the average amount of seasonal unemployment is about 2 per cent of the insured population.¹ It seems likely that among the uninsured population there is a similar movement. This means that throughout the year there are on the average some 400,000 seasonally unemployed. This

¹ Saunders, *Seasonal Variations in Employment*, p. 20.

will partly be automatically reduced. The relative importance of domestic coal in coal production is declining: the motor trade and clothing trade will be occupied with basic national needs, and not the catching of consumers' whims, and the hotel and restaurant trade will employ less people anyway. But agriculture and building will still be seasonal. Here again, for the sake of argument, we may assume that the total can be cut by one-half, to 200,000.

That is the whole of inevitable unemployment. To absorb the rest in the industrial structure is a matter of organization, very similar to the problem of absorbing the new workers whom we expect to come forward. The treatment of depressed areas—and, what is equally important, the towns unscheduled as depressed areas but which nevertheless have high unemployment—is a problem of locating the new arms factories in the proper places and of re-training and transferring men. A large part of existing unemployment represents the unemployment of men over 45 who are not easily re-trained: it may be that now they will get a chance of work again at their old crafts, if not the problem of organizing them is similar to that of attracting the men of sixty-five and over back into the industrial machine. For the young and the middle-aged, there is no difficulty which organization and training cannot solve. If the Government insists upon building its new factories in districts where there is no unemployment of any kind, of course, then the problem of the depressed areas is impossible to solve. But of the

1,500,000-1,600,000 unemployed, there should be at least 1,000,000 who are available to increase the nation's economic man-power, even after allowing for folk who are going from job to job and for seasonal workers.

So at last we can summarize the nation's man-power. In peace-time, there are 22,020,000 occupied persons. Of these, 360,000 are in the armed forces, and 1,550,000 are unemployed, leaving 20,110,000 employed workers in the industrial system, producing the national income. In wartime, another 3,000,000 are withdrawn for armed and civil defence service. In their places, we will assume that one-half of the available reserve of unoccupied women—1,350,000—get work, that 250,000 old people get work, and that 1,000,000 unemployed are re-absorbed. This leaves 19,710,000 workers to produce the national income. If their hours are increased by 10 per cent, they become equivalent to 21,680,000 workers, or $7\frac{1}{2}$ per cent more than were employed in producing the national income before the war. The table opposite sets this out in tabular form.

Thus we have an effective working force $7\frac{1}{2}$ per cent greater than that of peace-time, despite the withdrawal of workers for the armed forces. Will this increased force be able to produce as much as the old force did? We have seen that the change-over of industry to its war emphasis tends to expand the sections of the national economy with high productivity at the expense of those with low productivity, and consequently that there is a *prima facie* case for expecting the new force

to produce even more than the old. We may assume also that standardization and improved capitalist and labour organization will tend to increase productivity. On the other hand, we shall have lost the young and

• TABLE VII
INDUSTRIAL MAN-POWER IN WAR-TIME

	<i>No. of workers</i> (<i>'000</i>)
Occupied population, 1938	22,020
Armed forces	360
Unemployed	1,550
Working population	20,110
Withdrawn for armed forces in war	3,000
Remaining working population	17,110
New women workers (half available reserve)	1,350
New workers over 65	250
Newly absorbed unemployed	1,000
Wartime working population	19,710
Equivalent in workers of 10 per cent increase in hours	1,970
Effective working population	21,680

powerful workers from the labour force, and the new female, old, and formerly unemployed workers cannot be expected to have the productivity of the workers they displace. Increase of hours, too, will tend to reduce hourly productivity.

Moreover, the effect of air raids, apart altogether from the damage which may be done by them, is an influence which the last war's experience suggests may

tend to lower productivity. Warnings themselves, lasting for as long as an hour, can evidently damage productivity very seriously. These estimates, however, tentative though they are, suggest that the national output can be satisfactorily maintained despite the air raids, provided that these labour resources are mobilized. Indeed, they support the tacit assumption of Chapter II that we can produce a national income equivalent to the peace-time "capacity," some 10 per cent above the record peace-time national income of 1937. But it is clear that in order to achieve this the whole of the nation's ingenuity must be used in the development of methods to reduce costs, to increase outputs, and to adapt the nation's economic structure into the form in which it is required for winning the war.

CHAPTER FIVE

BUILDING THE WAR SECTOR

IN TERMS of industry, what are the requirements of the war sector? In an earlier chapter, it was estimated that the total annual cost of maintaining the fighting forces at the peak of the war would be something like £3,000,000,000, of which some £2,300,000,000 would represent technical and military supplies—guns, aeroplanes, battleships, tanks, ammunition, motor lorries, petrol, searchlights, gas masks, deep shelters for vulnerable civil population, and so on. We know from the last chapter that we can produce at this pace. By cutting out consumption we can liberate sufficient resources with sufficient productivity to turn out these vast quantities of material. But it is obviously a tremendous job. How much of the nation's man-power will it require? What new industrial plant will be required? And how can the nation's workers be trained for the production of this great output?

All sorts of estimates have been made of the number of workers required to keep one soldier in the field. The American military authorities, on the basis of their experience in the last war, have estimated that it needs seventeen men in the factories to keep one soldier at the front. The German experts in *Wehrwirtschaft* suggest that eight men in the factories are enough. Possony, in *Tomorrow's War*, bases his estimates of

industrial requirements upon the assumption that between nine and nine and one-half workers are needed. At this rate, even on the Germans' reckoning 20,000,000 workers would be needed to maintain an army of 2,500,000. In other words, to keep a British army of 2,500,000 in the field would require the whole of Britain's occupied population—and then there would be the Air Force and the Navy to be provided for! These estimates, indeed, do not mean precisely what they say. It may be true that eight (or nine, or seventeen) men are required to keep a man in the front line: some of them will be on the lines of communication, some handling food supplies, some in the munition works, some in the steelworks, some mining coal, some making consumption-goods for the munition workers and for themselves, and some making exports to pay for the imported raw material. But unless we know precisely what workers are referred to, and precisely how far back into the production process the computation goes, and precisely what proportion of the mobilized Army is in the front line, estimates of this kind do not help us very much. They are worth mentioning, for they have been bandied about freely in preliminary discussion of war economics. But they cannot be relied upon for our present use. We will tackle the problem in rather a different manner.

As was explained earlier, the figure of £2,300,000,000 was obtained after a lengthy analysis of the services' material requirements, priced according to what was known of peace-time costs of equipment of various

kinds, and reinforced by the experience of the belligerents in the last war. Evidently, most of these requirements represent output of the metal trades. Certain other industries—the chemical industry, the glass industry, the rubber industry, for example—have an important contribution to make. At least £100,000,000—double the peace-time national consumption—is petrol. But we shall not be far wrong if we assume that the whole of the production (apart from petrol) must be achieved by the metal industries—iron and steel, non-ferrous metals, engineering, ship-building, motor and aircraft manufacture. Now of the output of these industries, taken as a whole, between 10 and 15 per cent is represented by imported raw materials, and about 5 per cent represents the cost of transporting raw materials and semi-finished products to the finishing plants. Thus, between 80 and 85 per cent represents either British-produced raw material and fuel or work done by British industry. We will take the lower figure, for it is certain that some of our supplies of finished munitions will come from abroad, either in finished or nearly finished form. We shall import shell steel, for example, and from the Dominions we shall import aeroplanes. At this rate, therefore, the total home production required will be £1,760,000,000.

Part of this sum, of course, represents British-mined coal and iron ore. But most of it is work by the metal industries. We can therefore get a rough approximation of the number of workers required to produce it—including the miners and the steel-workers and the

engineers and every other worker involved in the process except transport workers—by dividing the total by the net output per worker in the metal industries. The net output is the total production less the cost of materials, and it represents the value the worker actually adds to the materials. In 1935, the net output per worker in these metal trades—which was actually almost exactly the same as that of industry as a whole—was £225. Since then, it has certainly risen very substantially. The Preliminary Results of the 1937 Census of Production, not yet sufficiently complete to be used for this purpose, showed in the iron and steel industry a tremendous advance in output per worker. At the outbreak of war, indeed, the output per head in the metal trades was certainly £250, even in the same working hours as 1935. Overtime working, and the 10 per cent increase in hours envisaged in the last chapter, mean that at the present time and in the heat of the war, the productivity in these industries is something like £300 per man. This suggests that some 6,000,000 workers will be needed to create this production. To the extent that some industries, such as chemicals, have a higher output per worker, this total will be reduced: to the extent that others, such as coal-mining, have a lower, it will be increased. To the extent that air raid warnings reduce productivity, again, this figure must be increased. But the estimate given should be reasonably near the truth. It takes no account, of course, of the transport workers required to carry this vast volume of

production; only industrial workers are included. Moreover, it takes no account of the industrial workers required to produce the non-technical requirements of the armed forces—the uniforms, the army huts, the boots, the food, the tobacco. These requirements will probably bring the total of industrial and mining workers needed for the war sector up to 7,000,000. This figure seems appallingly high. But in the last war, according to the History of the Ministry of Munitions, nearly 5,000,000 workers were engaged on Government work in July 1918. In a much more highly mechanized war, it is clear that these estimates are of a sensible order of magnitude. In all probability, indeed, they are on the low side, rather than on the high.

We can now begin to get a schematic picture of the transfer of resources in terms of industry. We know the reduction in consumption of manufactured goods, we know the decline of constructional work, and we have an estimate of decline in exports—all from Chapters II and III. We can therefore get some idea of the reduced civil demands upon manufacture, mining, building, and public utilities—the fall is something like 45 per cent. In these sections of the national economy, the occupied population in employment in peace-time was 9,330,000, of whom well over a million were already engaged upon rearmament. We can say roughly, therefore, that the civil demand in wartime requires 4,500,000. We reduce this by 10 per cent to allow for longer hours, giving 4,000,000 in all.

The war sector and the essential civil sector therefore require some 11,000,000 industrial workers. Transport and communications will still need about 1,500,000 even with longer hours. Agriculture will need more—we may put the figure at 1,250,000 instead of 1,060,000. We know from Table VII that we have 19,710,000 workers available. So we have some 6,000,000 workers available for distribution and services, the equivalent of over 6,500,000 workers with peace-time hours, compared with 8,920,000 in peace-time. These results, which must not be regarded as representing more than very rough trends, are set out in the table opposite.

This table is really the counterpart of the previous analysis in Chapters II and III of the changes in the direction of spending: if the problem is handled rightly at the man-power end, the change in spending will more or less automatically follow suit, and if the problem is handled rightly at the consumption end, this redistribution of man-power will likewise follow sooner or later. The objective of Government policy is to force the structure into the right shape by pressure, so to speak, at both ends. The thing to be avoided, obviously, is contradictory action by Government departments, which try to do one thing with man-power while doing another with the other sections of the national economy. This is the case for unified planning of Governmental policy: without it, the Treasury, the Ministry of Supply, the Board of Trade, and the Ministry of Labour will all be trying to put the national

TABLE VIII

DISTRIBUTION OF EMPLOYMENT IN PEACE AND WAR

<i>Industry or service</i>	<i>Peace-time</i>		<i>War-time Employed (^{'000})</i>
	<i>Occupied (^{'000})</i>	<i>Employed* (^{'000})</i>	
National defence	360	360	3,360
Agriculture and fishing	1,060	1,010	1,250
Industry, mining, building	10,230	9,330	11,000†
Transport and communications	1,450	1,330	1,500
Distribution and services	8,920	8,440	6,000
Civil occupied population	21,660	20,110	19,750‡

* Approximate.

† For the war sector 7,000,000, and for civil sector 4,000,000.

‡ Total war-time working population, given in Table VII, was 19,710,000, excluding 550,000 inevitably unemployed.

economy into different shapes, and the result will be dislocation.

Before we go on to discuss the transfer itself, it is important to see what will happen inside the "industry, mining and building" section itself. It is evidently impossible to apportion the 7,000,000 workers needed for the war sector and the 4,000,000 workers needed for the essential civil sector between the various activities. Probably as many as 5,000,000 of the war sector should be in the metal industries, in the wide sense in which we have defined them, many will be in mining and chemicals, and some in clothing, textiles, and food, drink and tobacco. As for the essential civil sector, there will certainly be a big reduction in building and contracting, in metals, in clothing, textiles, woodworking and paper, and some decline in food, drink and tobacco. So little is known of the ramifications of the war programme—new weapons will no doubt be developed, with corresponding new industrial requirements—that it is rather pointless to try to set out the reductions in various industries. The clear conclusion is that there must be a tremendous expansion in the metal trades, a substantial expansion in chemicals, a very large reduction in building and contracting and a rather smaller reduction in textiles and clothing.

It is useful at this stage, for purposes of comparison, to set out the present distribution of industrial workers in Great Britain. We exclude Northern Ireland, incidentally, as we do from all these population statistics

because it is excluded from the Census returns. The number of insured persons is 297,000, or 2 per cent of that of Great Britain. In Table IX, the number occupied in 1938 is calculated from the 1931 Census in precisely the same way as the numbers in Table VI were calculated. With them is given the number of insured workers unemployed at July 1939 (which may be increased by 12 per cent to allow for non-insured workers), and the percentage unemployed in July 1939.

Table IX suggests at once that the metal industries will have to be expanded by some 2,000,000 workers. They may indeed have to be increased by more, for we shall have to maintain some supply of metal goods for civil consumption and construction, and our export trade in engineering, iron and steel and motor cars is too valuable to lose entirely. The table also reveals the existence of large numbers of building and contracting unemployed—mainly unskilled men—and a general possibility of drafting large numbers of men from building to other activities. In the textile trade, too, there is obviously a useful labour reserve. As for coal-mining, in the absence of new equipment the limit of output would probably be reached with the absorption of the present unemployed—though it is always rather risky to talk about limits of industrial output in war-time.

At the other end of the scale, where will the reductions come in the distributive and service trades? Here, statistically, we are on much less certain ground, for the unemployment returns cover only a part of

TABLE IX

DISTRIBUTION OF INDUSTRIAL WORKERS

<i>Industry</i>	<i>Number occupied 1938 ('000)</i>	<i>Insured unemployed July 1939 ('000)</i>	<i>Percentage unemployed* July 1939</i>
Mining and quarrying	1,070	110.6	11.5
Non-metal mining products	80	4.8	7.6
Bricks, pottery, glass.	250	25.0	10.8
Chemicals	270	11.7	4.8
Metal industries	2,930	159.3	6.3
Textiles	1,150	102.0	9.7
Leather	80	5.1	7.1
Clothing	860	50.7	8.5
Food, drink and tobacco	770	39.3	6.9
Woodworking	350	22.1	9.0
Paper and printing	540	22.2	5.0
Other manufactures	230	9.0	5.8
Building and contracting	1,340	212.5	15.7
Gas, water, electricity	310	13.7	6.3
Total	10,230	788.0	8.9

* These are percentages of the number of *insured* workers, which is of course less than the number of *occupied* workers.

these trades, and the increases and decreases in the number of insured workers provide very little guide to the changes in the number of occupied persons in those trades. In the last seven years, there has been great expansion in the number of insured workers in the service trades, but much of this expansion is accountable to the movement of workers from uninsured employment into insured employment. However, it is important for us to get some idea of the sort of work that the 8,920,000 occupied distribution and service workers do. We therefore set out the Census return of occupied population in these trades in 1931, the number of insured workers now engaged in them, the percentage increase in the number of insured workers since 1931, and the pre-war level of unemployment.

According to the scheme, the number of occupied workers in this group must be reduced by about one-third. It will obviously be impossible to reduce the number in "national and local government"—in war-time the number engaged in the public service tends to rise rather than fall. Something like two-thirds of the necessary reduction will be achieved by the cuts in the employment of entertainment, hotel and domestic workers in accordance with the planned reduction in consumption, and from certain reductions in "professional services." The remaining third must come from distribution. The one conclusion which emerges unmistakably from this table is the need to effect big economies in the distribution of the nation's food and consumption-goods. This is as plain, indeed, as the

TABLE X

DISTRIBUTION OF DISTRIBUTIVE AND SERVICE WORKERS

<i>Service</i>	<i>Number occupied 1931 ('000)</i>	<i>Number insured July 1938 ('000)</i>	<i>Percentage Increase in Number insured 1931-38</i>	<i>Percentage unemployed July 1939</i>
Distribution, commerce, finance	.	2,369	12.2	6.4
National and local government*	.	633	18.2	11.3
Professional services†	.	216	29.6	4.0
Entertainment, sport	.	150	62.2	13.6
Hotels, restaurants, etc.	.	501	17.9	11.0
Laundries, dyeing, etc.	.	180	21.0	5.3
Domestic service	.	1,626	—	?
Other services	.	191	15.0	10.9
Total	.	8,386‡	16.0	8.0

* Includes administrative and clerical staff, teachers, postal workers, police, street cleaners and repairers, nurses, etc.

† Includes professional men and women, nurses in private hospitals, teachers in private schools, accountants' clerks, etc.

‡ Estimated increase to 1938, 534,000, or 6.4 per cent.

need for a great increase in the number of metal workers.

Enough detail has now been suggested to show the order of magnitude of the tremendous changes in the occupational distribution of the nation's man-power. Some 3,000,000 men must be recruited to the fighting forces—many, of course, have been recruited already, for the peace-time figure is the Regular strength, and not the number which happen to be mobilized at the outbreak of war. The numbers engaged in the metal industries must be increased by 2,000,000, and there must be an increase of possibly another 1,000,000 in certain other expanding war activities, such as agriculture, transport, chemicals, and so on. This total of 6,000,000 must be found by an introduction into the industrial system of 1,600,000 unoccupied women and aged workers, the re-employment of 1,000,000 unemployed, a reduction of 2,400,000 in the number of employed distributive and service workers, and a reduction of 1,000,000 in the number of workers employed in civil industry and building. These magnitudes are the measure of the economic transformation which war involves. In the course of the war, something like 30 per cent of the occupied people in the country will have to change their occupations. That is the organizational task of war.

The duty of the Government, it need hardly be emphasized, is to see that this transformation is carried out smoothly. In the first few weeks of war, the Government was badly failing in this duty. People were being

thrown out of work, and their old occupations were closed to them, but no new occupations were being provided. To provide them, indeed, requires tremendous planning for retraining. Everyone knows that there will have to be training for those who are entering the armed forces, and that the lack of training facilities is hindering the Government from calling up more men. But it is even more urgent that there should be training facilities for new metal workers, for agricultural workers, for chemical workers, and for all the other skilled workers who will be required for the economic programme. It takes as long to train a metal worker as it takes to train a soldier. This means that the Government should, on a large scale and at once, begin to train people for metal-working jobs. What is required is a general training in semi-skilled work: there is not time to train the skilled worker proper. Such training must be on a far greater scale than anything which has been attempted hitherto in this country. In 1938 the Government training centres for the provision of vocational training for men about to leave H.M. Forces and for re-training unemployed men trained nearly 14,000 men, and the number who finished training in the instructional centres—for the most part trained in semi-skilled work—was 24,215.¹ Private firms in the metal trades, of course, are training workers on a substantial scale—there is no statistical evidence of the extent of this work. There is no doubt, however, that the existing facilities are hopelessly

¹ *Report of Ministry of Labour for 1938*, pp. 105-6.

inadequate to deal with the necessary influx of trainees. Without any further delay, therefore, the Government should get the necessary workshop equipment and instructors together—if necessary reducing the pace of current output in order to do so—and should open training centres all over the country. All unemployed, all workers in non-essential occupations, and all unoccupied women should be eligible. The trainees would of course be paid at a rate sufficient to attract them from unemployment and from the non-essential trades, and they should be required to give an undertaking to accept work as soon as their training is complete.

This process must run concurrently with a programme of expansion of capital equipment in these industries. The pre-war plans provide for tremendous expansion, but after that expansion there will still be more to be done, although there will be less in comparison than there was in 1914. This problem is less difficult than that of labour training. If these factories are run twenty-four hours a day, as they should be, then three times as much new labour is required as new equipment. It is evidently important to locate the training centres and the new factories reasonably near to one another. They should obviously be placed where there is an unemployed reserve of labour already—especially in Lancashire, Cumberland, South Wales and Scotland. For London workers, training centres might be at places like Luton: men are a great deal more mobile now that their wives and children have been evacuated.

It might be reasonable, indeed, to ask the men to move out of London altogether, and to live near the training centre (and then near the munitions factory) for the duration. It might even be possible to re-unite families again outside London. But that supposes a degree of organization which is hardly likely to be practicable in fact.

These new workers, of course, would only be semi-skilled workers. There will therefore have to be an organization of the available skilled labour force in order to make the best use of the skilled men. The skilled men who are doing semi-skilled jobs must be weeded out and put to skilled work. The greater the man's skill, the more important job he must have. It may be necessary to ask skilled men to move their employment to the new factories, and it may be necessary to ask them to set aside long-standing union practices. The whole process, indeed, is one of dilution on a tremendous scale, and at once the question of industrial conscription comes to the fore. How far will it be necessary for the Government actually to order workmen to do specific jobs, to move their place of employment, or to renounce traditional privileges? Politically, this is one of the key problems of the war, and it should be considered with great care. It may be argued, of course, that as everyone agrees that it is just and equitable to conscript men for the fighting forces, it is also just and equitable to conscript labour. And as long as every part of the social structure is conscripted, there is much justice in this argument.

Indeed, if the Government is unable to get co-operation in the national effort from any section of the community, it is entitled to enforce such co-operation. The power to conscript must always remain in the background.

But there is no doubt, either, that voluntary co-operation is vastly preferable to rule by decree. We are defending free institutions, and the freedom of our institutions is a source of strength, as we shall discover before the war is very much older. In this particular case, there is every evidence that the fullest possible co-operation of the trade union movement is forthcoming. From the military point of view, from the point of view of increasing output and efficiency, and from the point of view of public morale, it would be madness to try to impose industrial conscription at the present time. It is not sufficiently recognized that the unions have a double function in the national effort: their primary function is to protect the long-term interests of their members, but they have a second function of initiating and encouraging plans for economy in the use of labour, and for increasing efficiency. This constructive part which the unions can play in wartime is of manifest importance: the tacit approval of the trade unions is necessary for the success of any plan to increase output, but their positive support and co-operation can make the plan immensely more successful.

It is impossible to avoid the fact that dilution on the contemplated scale is a great potential long-term danger to the trade unions. The experience of the last war is clear proof of that. Before they accept it, the

unions are fully entitled to require that the employers and the Government guarantee that the workers engaged in the industry before the war should have preferential treatment afterwards, and that trade union practices which are suspended in the interests of greater output would be suspended only for the duration. The Government would be doing no less than what is just, indeed, if it announced that it proposed to compensate or to maintain fully in the post-war period all workers who ultimately proved to be redundant—just as it has already guaranteed to compensate firms whose plant proves to be redundant. It would be reasonable, moreover, to promise firmly that a future Ministry of Reconstruction would prepare schemes for re-employment of metal workers after the war, in order that the post-war contraction should take place with the least possible friction. Such guarantees are just and necessary.

In order to enlist the unions' positive co-operation, it is evidently necessary to give their representatives some responsibility in the actual direction of factory operation. In the organization of the training centres and in the process of dilution, the unions should be consulted at every point, and should be represented in the management. In the last war, there was great advance in the status of organized labour, and as the importance of labour in the national effort grows, the positive contribution which the unions can make becomes increasingly significant. In this field, very little legislation is required. The most that will be needed is the legal enforcement throughout industries of

agreements reached between the Government, the unions, and the employers' associations.

The chief industrial problem of the expansion is the labour problem, for in the last resort it is easier to build new factories than to train workers to work in them. But the organization of the nation's industrial plant is an equally important part of the building of the war sector. The existing workers and plants in the metal trades must be occupied before there is need to spend resources on the creation of new ones. In the peace-time rearmament period, the Government made very little attempt seriously to mobilize the industrial capacity of the metal trades. It tended to rely for the bulk of its requirements upon a relatively small number of specialist firms. For airframes, there were about a dozen direct contractors; for aero-engines there were only four; in naval shipbuilding, only a handful of firms were interested; there were only three producers of armour-plate and one of heavy gun-mountings. The shadow scheme brought in the chief motor firms for aircraft production, and later shadow schemes brought in important engineering firms, such as Associated Electrical Industries, which had previously participated in the rearmament effort only to the extent that their own specialities were required. The various main contractors were required to find their own supplies of labour and material, and to do their own sub-contracting. Certain important components, such as magnetos for aero engines, were bought in bulk by the Air Ministry and were then distributed to

contractors. But apart from some exceptions of this kind, the main contractors were left to find their own sub-contractors. The policy was one of "Business as usual during rearmament," and the Service Departments followed their traditional plan of limiting lists of main contractors to firms in which they had complete confidence, and of leaving the responsibility to them. In 1939, these lists of contractors were extended, and industrial resources were tapped which had not been drawn upon earlier in the programme. But at no time did anyone in the Government regard it as his business seriously to mobilize the resources of the engineering industry. As the War Office, the Admiralty and the Air Ministry were all acting independently, indeed, it was very difficult to see whose job such a mobilization could have been.

Nevertheless, substantial results had been achieved by the outbreak of war. In a year, aircraft output had quadrupled. Naval equipment was being produced at a great rate, and it was said that army equipment was coming forward for the first time as the units could absorb it. And at the beginning of September, the effort had not nearly reached its peak. Given a solution of the labour problem, the existing extensions and plans for further extensions—which presumably include, of course, the change-over of the plant of the motor manufacturers and similar immediate switches from peace to war economy—can and will increase output tremendously¹. But the scale of our requirements is so

¹ Sir Kingsley Wood, Minister for Air, stated on October 10, 1939, that plans provided for doubling of aeroplane output.

great that it is very difficult to believe that this expansion will be sufficient. Before the war, there were disconcerting rumours that certain firms were not being allowed to tender for contracts. Other firms were asking the Service Departments what they could do, and were being rebuffed. Hundreds of small firms, well able to produce something, were not being approached. The fact that sub-contracting was left with the main contractors meant that the firms which had contacts with the main contractors got orders and the others did not. By the beginning of the war, the Service Departments' sins of commission had for the most part been rectified: the whole machine was much more efficient than it had been at any earlier time in the effort. But there was no doubt whatever that the full resources of British industry were not being exerted.

The expansion of pre-war plans and the building of new Government plants will no doubt solve many of the problems. But full use of the present structure is of equal importance, especially as new plant will ultimately be redundant and will create all sorts of post-war difficulties. The extent of small-scale enterprise in the engineering, shipbuilding and vehicles trade is not generally appreciated. In Birmingham and Sheffield, of course, everyone knows all about it, but the ordering is done in London, and so great is the convenience of ordering through large firms that the small firms are neglected. More than one-half of the workers in the engineering, shipbuilding, and vehicles trades are actually in firms which employ less than 1,000 men.

One-fifth of them, indeed, are in firms employing less than 100 men.¹ It is abundantly clear that the 195 firms employing more than 1,000 do a far greater proportion of the armament work than the 5,652 firms which employ between 11 and 999, and the 24,074 which employ not more than ten. There should be sufficient indication in the Census of Production returns of the sort of things that these firms can do. Firms of this kind played a tremendously important part in the last war, and they must be allowed to play a similar part in this one.

The problem here, of course, is one of organization. If there are to be five Ministries buying war material—War Office, Admiralty, Air Ministry, Ministry of Supply and Home Office—then the planned organization of these resources is obviously impossible. If the whole thing is to be directed by correspondence from London, these small firms cannot be used. But a comprehensive Ministry of Supply—with more comprehensive powers even than those exerted by the Ministry of Munitions in the last war—could assuredly do this job, provided that its work was properly decentralized. The firms are willing enough—apart altogether from patriotic motive, many of their own products are non-essential. The problem is to know what products are wanted and to know what these firms can do and to know about local conditions. That is a relatively simple problem of planning in wartime.

The next step is to increase efficiency in the war

¹ *Final Report of 1935 Census of Production*, Part II, pp. 213-14.

industries and indeed throughout the industrial structure generally. The proper utilization of skilled labour, of course, is one important step. But equally important are the measures on the management side. In the war industries themselves, of course, the objective is quantity production. In aircraft manufacture, many of the organizational problems have been solved, but there is still room for substantial standardization. For example, each firm tends to demand from the special steel-makers a separate specification—a different proportion of steel, nickel and chrome, or whatever the alloy is. This makes no difference to the efficiency of aircraft production, but it makes a very great difference to the efficiency of special steel production, for the manufacturers have to make it in small lots instead of in large. A similar lack of standardization in the aircraft industry is the number of different specifications for wheels—different firms' models have different-sized wheels, with consequent extra cost in manufacture. Any engineer could give a dozen instances of this lack of standardization. In the same way, there is failure to get the best possible production methods because of insufficient co-operation between manufacturers—insufficient exchange of ideas and insufficient exchange of patents. Throughout the process of armament manufacture, there has been great advance in the last years, but no one pretends that efficiency is at its peak. The Government, by imposing its own costing systems upon the shadow factories, is beginning to get a yardstick for the measurement of efficiency. But much more could be done.

Throughout the war sector, the objective must be quantity production, and that requires time and organization. The small firms must be linked into groups under some sort of Government supervision. The large firms, which are already engaged in quantity production, must be checked against one another, in order to get the maximum efficiency. At the same time, constant research must be carried on—and it is evidently most sensible to separate the research activities from the production activities, and to centralize them so that no effort is wasted. Whether the whole of the engineering industry should be nationalized, in the sense that the Government actually buys out the shareholders, is not relevant to the technical problem of maximizing output at the lowest possible cost. But it is abundantly clear that the Government must exercise a very substantial measure of control all the time.

In the essential civil sector, there is equal need for some element of public control. From a greatly decreased number of workers output must be maintained as far as possible. The essential civil industries—in particular, textiles and clothing—are very much less rationalized than the heavy industries.¹ In textiles and clothing, for example, the outputs per head are £149

¹ The basic food trades are less diffusely organized than textiles and clothing. Grain-milling is dominated by three concerns, Spillers, Ranks, and the C.W.S. Margarine and soap are dominated by the Unilever group. Sugar refining is dominated by Tate & Lyle; chocolate-making by a few large enterprises. Imperial Tobacco and Carreras dominate the tobacco trade.

and £151 respectively, compared with a national average for the factory trades of £229. Only one-eighth of the workers in the textile trade, and $7\frac{1}{2}$ per cent of the workers in the clothing trade, are in establishments which employ more than 1,000 men. There are great possibilities, therefore, for increasing productivity. The feature of these trades is the multiplicity of designs and qualities of product. In wartime, this variety of choice is a luxury which the nation cannot afford. The experience of the last war shows very clearly what can be done. These trades then organized schemes for the production of standard civilian boots, suits, overcoats, blankets, flannel and hosiery, at standard price and of standard quality. Each boot-making firm, for example, made standard boots to the extent of one-third of its capacity, and the War Office gave special priority to supplies of leather for this purpose. This could and presumably will be done again on a larger scale. Then, a considerably increased output per head was achieved by this standardization, and what was done before can be repeated, especially as these industries, though still diffusely organized, are much more closely knit than they were then. Throughout civil industry economies of this kind are possible: a very expensive peace-time luxury is the tremendous range of consumers' choice.

This is one of the reasons why it will be possible to make the very heavy reduction in distributive costs which is implied by the withdrawal of something like 800,000 workers from distributive service. We pay

more for our goods because we can choose where to shop, because there are varied goods on offer, and because plenty of shopping facilities are available. In wartime, the introduction of rationing at once reduces these facilities: one has to stick to the same shop, and there is no variety. Rationing and standardization of quality and price strike at the root of the distributive trade, wholesale and retail. The time taken for each purchase falls and so does the volume of purchases. Specialist shops are left without business. Thus there is at once a reduction in the number employed in distribution. Even in the first few days of the war, the West End stores began to dismiss workers apace, and the draught will soon be felt by thousands of shops up and down the country. Eventually, the chain stores and the co-operative stores will probably become centres for the distribution of standard quantities of goods of standard quality¹ and price, and the less efficient small shops will either have to link themselves together to pool sales or be squeezed out of business altogether. There is no doubt whatever that the sorts of goods which the public will be able to consume in wartime could, should and will be put in the hands of consumers with very much less labour cost than they are in peace-time. Thus the necessary contraction will be achieved.

Lastly, there is the problem of supply of materials.

¹ In the first weeks of the war the Petroleum Control Board standardized civilian petrol; the Ministry of Food rightly introduced standard margarine, but decontrolled later, under pressure.

It is possible to expand the output of munitions indefinitely, given the right organization of the plants and the right organization and training of the workers, provided that there are adequate supplies of basic materials. These supplies are limited. Some are imported, and the carrying-capacity of our shipping and our ability to buy imports are limited. As the demands in wartime far exceed the supplies, and as it is imperative that the supplies should be used to the best advantage of the national effort, it is necessary that these materials should be rationed. People must be prevented from using steel for building hotels or copper for making saucepans. The supplies of these essential materials must be directed into those channels in which they best serve the national interest.¹

In the last war, it was found that this objective was best attained by complete Government control of the visible supplies of the key commodities. The Government was very unwilling to do this, It cut right across all the prevailing political and economic philosophy of the time. But the pressure towards control was inexorable. The various Ministries would begin by buying the supplies which were required by the armament factories. Private interests would then proceed to buy up all the rest, and prices would begin to rise. Shortage would become imminent. The Government departments, urgently needing the material, and seeing a shortage ahead, would buy

¹ This is also true, of course, for the use of materials for essentials for the civil population, such as oil-seeds.

supplies, although they were not actually needed at the time. Then common sense would suggest that one Government department should buy for all Government contractors. This having been done, the next step was to take over all visible supplies. It was found, indeed, that once any measure of control had been undertaken, the forces making for increased control were irresistible. And finally the Government found itself compelled willy-nilly to control the whole supply of the material. This time, of course, the Government has realized this, and at the outbreak of war the Ministry of Supply took complete control over iron and steel, non-ferrous metals, and a number of other key materials.

The question then arises, what is the Government to do with these supplies when it has got them? Evidently they must be rationed. So we get priority schemes. The Government decides which consumers shall be served first. Normally, Government war contracts will have "A" priority, essential civil work will have "B" priority, and non-essential work "C" priority. Within these major classes of priorities, of course, there must be sub-divisions. The classes of manufacture which the General Staff requires most get first priority. At various times in 1917, aircraft, tanks, locomotives and agricultural machinery obtained special priority. Eventually, the Departments agreed upon a co-ordinated list of priorities. At the outset of the present war, it appears that special priority is being given to material for civil defence. The priority system should apply, of course, not only to the basic material but also to all

semi-finished material and to the use of the finishing plants themselves. In this way, the things which are needed most are produced fastest. If "bottlenecks" appear at any point in the industrial process, the most urgent demands are satisfied first.

The allocation of priority must necessarily be a little arbitrary, and the planners have to establish some principles and follow them. If the Service chiefs can agree about the relative order of priority of, say, aeroplane production, ammunition, anti-aircraft guns and tanks, the planning job is relatively easy. But what priority should be given, say, for new mining machinery which would enable the output of coal to be increased or new rolling-stock for the railways, or for steel for the construction of a new steelworks which would come into production in two years' time? What priority, relative to munitions and essential civil needs, should be given to materials for the export trade? What should be the priority for new milling machinery, to save labour in the production of flour? Obviously the allocation must be arbitrary. In the practice of the last war there were all sorts of ticklish problems of this kind in priority allocation. On the whole, the planners took a very long view, giving good priority to the production of machinery for saving labour and cheapening production. And their efforts were well justified by events, for as soon as the priority planning seriously got under way, the industrial effort became overwhelmingly powerful. In wartime, indeed, the criteria of relative importance of projects are fairly straightforward, and

experience did show that the planners were able to give the right answer.

The lessons of the last war on priorities were quite plain. The most important was that only one body should issue priority certificates or licences¹. There was tremendous confusion because priority orders were allotted by a number of different Departments. Not only were the War Office, the Ministry of Munitions, the Admiralty all issuing priority certificates—each from its own priority list—but also different sections of these Ministries controlled different things. Not until the end of the war were the relative priorities on the three Ministries' lists decided, and the machinery unified, and there were long struggles of prestige between Ministries and within them. Only in the later stages of the war, indeed, was there real co-ordination and complete knowledge by the Control of everything that was going on. In this war, the Government appears to have partially learned this lesson. General control of priority rests with the Ministry of Supply, who exercises it on behalf of other Departments if they require it. But still there are five Ministries which are interested in industrial priorities, and which will presumably fight with each other in the Cabinet for quotas of material and priority in the use of plant.

¹ This applies, of course, only to priority certificates for use of materials and plant for the war sector. There is no reason why the Ministry of Food should not control materials which are needed for essential civil sector only, and allocate supplies according to its own priority schedule (e.g. use of crude vegetable oil for refining into margarine or for paint manufacture).

So much for the industrial problems which arise in the building of the war sector. We have seen the dimensions of the transfer which will be necessary, and of the expansion of the munitions industry which will be required. We have touched on the labour problems which are involved, the sort of industrial resources which are available, and the priority and licensing schemes by which the planners ensure that first things will come first. In these ways, the nation's industrial strength can be mobilized for war. Underlying all this, however, is the availability of the necessary supplies of raw material and foodstuffs, for without these the industrial machine cannot work and the men who operate it cannot live. That leads to the difficult problems of foreign trade, which we will now proceed to consider.

CHAPTER SIX

FOREIGN TRADE PROBLEMS

THE CENTRAL fact about Britain's national economy is its dependence upon foreign trade. In natural resources of fertile land and minerals, in relation to the size of her population, Britain is poor in comparison with the United States, the Dominions and Sweden, and is certainly no better off than France or Germany. Other nations may make some show of self-sufficiency, but Britain cannot. About three-quarters of the nation's food supply is directly imported, and the home production depends upon imported feeding-stuffs and fertilizers. Two-thirds of the consumption of iron ore, almost all the non-ferrous ore, all but a fraction of the oil and petrol, all the rubber, all the cotton and five-sixths of the wool, and most of the timber consumed by British industry are imported. In the face of physical facts such as these, it is manifestly absurd to talk about self-sufficiency. In wartime as in peace-time, the British economy must be based upon international trade.

This dependence upon imports is not necessarily a source of weakness. Provided that we are able physically to transport the goods to Britain, and provided that we are able to pay for them, it may even represent a source of strength. If the Navy can protect our ships on the high seas, and if shore batteries and fighter squadrons can protect the docks against destruction

then it may well be advantageous to be an importer. We import oil: Germany produces it from coal at tremendous real cost in labour-power and in plants which are extremely vulnerable to attack from the air. We get our supplies of aviation petrol far more cheaply in terms of man-power than the Germans can possibly do. We can import steel from America: the Germans must with great difficulty buy iron ore, and with tremendous expenditure of man-power turn it into steel in works which may at any time be destroyed by successful action by the R.A.F. Moreover, we are no more dependent upon imports than other nations depend upon our ability and willingness to take those imports. Even the United States, most self-sufficient of all nations, would face grave economic difficulties if she were unable to export to Britain. Argentina and the smaller neutrals would face economic paralysis. In the long run, therefore, we are likely to get more allies, for the neutrals have a fundamental trading interest in our cause. If the Navy could do nothing against the submarine, and if our land, sea and air forces were unable to protect enough docks and harbours to allow the ships to unload, our dependence upon imports would be fatal. Otherwise it is a source of strength.

But our financial, shipping and naval resources are limited, so it is plainly necessary to reduce imports as much as possible. In order to conserve financial resources, the value of imports must be reduced. In order to save shipping, their weight and volume must be reduced. The convoy system may protect our ships

against the submarine. But the time taken to assemble the convoy and the reduction of the average speed of ships in convoy mean that our ships can carry much less in a year than they can do in peace-time. Even if our merchant fleet were big enough to carry our whole import requirements in peace-time, economy in their use would therefore still be necessary in war. Thus, the distance of haul is as important as the actual reduction in quantity of goods to be transported. For example, we get three-quarters of our building timber from Scandinavia, U.S.S.R., Poland and the Baltic States. The rest comes from Canada and the U.S.A. If the whole supply had to be brought from Canada, about twice as much tonnage would be needed. As much shipping effort would be needed to bring half the peace-time imports of timber to Britain as is needed in peace-time to bring the whole lot.

In the wartime organization of shipping and importing, we therefore have to take into account both the financial and the shipping aspect. If the country can get credits and can mobilize its foreign securities so that the size of the adverse balance of payments is relatively unimportant, the import policy will be one of reducing the bulky imports. But if the shipping position is easy, then it is evidently best to bring in the bulky and cheap imports, in order to save foreign exchange. In the last war, the shipping shortage was much more critical than that of foreign exchange. Consequently, the bulky imports were rigorously excluded. Grain and flour imports were reduced by

38 per cent, while the more expensive but less bulky imports of meat actually increased. An interesting illustration of this is recorded by Sir Arthur Salter.¹ The Government wished to stimulate pig-breeding in order to save the very costly imports of bacon and pork. But the pigs would have consumed a greater quantity of imported maize than the volume of imported bacon and pork which would have been cut out. The foreign exchange position would have been eased, but the critical point was the bulk of imports and not the strain on the foreign exchange. So the scheme was abandoned.

This significance of bulk, of course, turns the whole import structure upside-down. For every £-worth of grain imported, 965 ton-miles of cargo space is required, and for every £-worth of sugar, 870 ton-miles. But for every £-worth of dairy produce, only 112 ton-miles of cargo-space is needed, and for every £-worth of meat, only 107 ton-miles.² Thus, with a given quantity of shipping, nine times as much value of meat can be imported as of grain, and eight times as valuable dairy produce as sugar. The differences in the cargo-space requirements of bulky industrial raw materials and semi-finished and finished goods are even more spectacular. Our imports of machinery in 1937 totalled in value only 147,000 tons, whereas we imported 8,033,000 tons of iron ore and scrap at half

¹ Food Storage for Defence supplement of *The Economist*, October 2, 1937.

² Derived from a diagram in *The Economist*, October 2, 1937.

that cost. In the whole of the last war, we shipped 25,500,000 tons of stores of all kinds to France, of which 4,959,000 tons were gun ammunition. But in 1915-18, we imported 25,850,000 tons of iron ore alone, and our total imports of raw material and war material were 46,300,000 tons. Our shipping problem, therefore, could be solved perfectly easily if we were able to afford to import shell steel instead of iron ore, aeroplanes instead of aluminium, and butter instead of oil-seeds for margarine. If we could afford to do so, we could tremendously reduce the scale of our shipping problem. It is rather dangerous, therefore, to think exclusively in terms of cargo-space, and not in terms of finance. The shipping problem is created by our lack of unlimited financial resources.

In peace-time, our imports consist for the most part of foodstuffs and raw and partly-processed materials. The amount of finished goods, ready for dispatch to the consumer, is very small. The way in which the official trade returns are set out does not suggest this. They give the impression that vast quantities of consumers' goods enter the country from abroad. In the following table, which sets out the chief imports in 1937, a more realistic classification is adopted. The table gives both tonnage and value. It would be interesting and useful to have an analysis of shipping space and mileage of haul for each class of import, but for obvious practical reasons such an analysis could be made only by the Board of Trade itself. The tonnage statistics as they stand give quite a good idea of the relative bulkiness of the various imports.

TABLE XI

RETAINED IMPORTS, BY VOLUME AND VALUE, 1937

	Volume (million tons)	Value (£ million)	Value per ton (£)
<i>Food, Drink, Tobacco—</i>			
Grain and flour	10.20	89.5	8.8
Feeding stuffs	1.81	11.3	6.2
Meat	1.53	86.4	56.5
Dairy produce	0.93	72.0	77.8
Fruit and vegetables	2.15	35.1	16.4
Sugar	2.26	20.3	8.9
Tea, coffee, cocoa	0.30	30.9	103.0
Drink	0.32	11.0	34.5
Tobacco	0.12	17.5	148.2
Group total (including other food)	21.58	417.9	19.3
<i>Goods for use in Industry—</i>			
Metal ores and manufactures	12.23	92.8	7.6
Textile materials	1.65	107.1	65.0
Wood and timber	10.20	61.5	6.0
Paper and paper material	3.52	33.0	9.0
Hides, skins, leather	0.15	21.6	145.4
Oilseeds and nuts	1.62	17.5	10.8
Oils, greases, resins, waxes	0.61	15.4	25.3
Quarried products, bricks, etc.	2.86	11.5	4.0
Fertilizer	0.50	1.1	2.1
Rubber	0.10	7.9	81.3
Machinery	0.14	23.3	162.0
Chemicals, dyes, colours	0.88	11.8	13.4
Group total (including others)	35.96	439.8	12.2
<i>Consumers' Goods—</i>			
Group total	0.18	43.1	204.0
<i>Petroleum—</i>			
Crude petroleum	2.11	5.0	2.4
Refined petroleum	8.87	41.0	4.7
Group total	10.98	46.0	4.2
TOTAL, including animals and parcels post	68.75	952.8	14.0

Petroleum imports are the most bulky of all in relation to their value. They represent a separate problem, however, for they do not compete for cargo space with other imports, being carried in tankers. Of the rest, grain, iron ore and timber are the bulkiest, followed by paper and paper-making materials, building materials, sugar, fruit and feeding-stuffs. These account for more than three-quarters of the total weight of imports. The expensive materials, on the other hand, which use up little shipping space but cost a lot of foreign exchange, are rubber, hides and skins, tobacco, and textile materials.

What happens to these imports in wartime? Earlier, we planned to reduce the civil expenditure on food by 20 per cent. The fall in the nation's effective demand for food, however, will be less than this. The consumption of the armed forces must be taken into account. Moreover, we expect to make savings in distributive cost, so that civil spending on food will fall by more than physical consumption. We can certainly economize, however, on food imports. Home agricultural production can be expanded to some extent: provision was made in our man-power estimates for an increase of 20-25 per cent in the number of land workers. The trouble is, of course, that home agricultural expansion may involve increased use of imported feeding-stuffs and fertilizers. Only about one-third of the cereal feeding-stuffs and a trivial proportion of oil-cake are produced at home.¹ Expansion in the livestock and

¹ Food Defence Plans Department, 1937 Report. The proportion of edible cereals produced at home is 13 per cent, of sugar 26 per cent, of fats 11 per cent, and of meat 50 per cent.

dairy produce sections, which would enable us to exclude expensive imports, would consequently necessitate an actual increase in the tonnage of imports. The policy is, therefore, to increase home output of cereals, potatoes and sugar-beet, to cut out the bulky imports.¹ This will require more imported fertilizer, but will certainly provide a net saving in shipping. The more expensive fruit and vegetable imports are cut down automatically, and so are imports of luxury foods and drinks. On the whole, however, we should expect to see a larger reduction in the imports of the bulky foods than in those of the expensive foods. In the last war, the tonnage of food imports fell by nearly 20 per cent between 1913 and 1917—imports in 1917 were only 14,000,000 tons. But grain imports fell much more than that, while meat imports were actually higher in 1918 than they were in 1913. The value of retained imports, at 1913 prices, fell by 15 per cent. Thus, there was a relative increase in the proportion of dear imports. It is reasonable to suppose that this time, too, the tonnage will be reduced by more than the value. A fall of 10 per cent in the value at pre-war prices (or rather, 1937 prices, which were higher) would reduce food, drink and tobacco imports to about £375,000,000, and a fall of 15 per cent would reduce the tonnage to 18,000,000 tons. With exclusion of luxury foods, the saving might be slightly more than this, and we will call it £350,000,000–375,000,000.

¹ This is, of course, the meaning of the Ministry of Agriculture's policy of ploughing up grassland.

In 1937, the retained imports of raw materials and industrial goods were £482,900,000, excluding petroleum. What will happen to these? In the last war, there was actually a fall in value, at 1913 prices, of 41 per cent. If imported finished munitions are taken into account, however, the fall works out at only 17 per cent. In a more highly mechanized war, imports will not fall as much. In fact, they will probably increase. The nation's productive activity will be greater than it was in peace-time—the number of people employed in industry, mining and building will increase by 15–20 per cent. Moreover, the industries which use most imported materials tend to be squeezed out. The textile and clothing industries, the paper industry, the industries which consume hardwoods, the building industry, all decline. It is possible, moreover, to economize in imported materials. Home timber can be used for pit-props, paper can be collected for repulping, artificial fibres can be developed, rubber can be reclaimed. Thus we can expect a smaller propensity to import, and more industrial activity with no more imports. Nevertheless, the demands of the war sector will be great. We assumed before that 15 per cent of the £2,200,000,000 annual output of technical equipment for the defence forces would represent imports of raw material and semi-finished and finished munitions. We may take a similar proportion for the cost of non-technical equipment—mostly uniforms, boots, and so on, with a relatively high import content—and then make an allowance for civil consumption, construc-

tion, and exports¹. This gives imports of raw materials and semi-manufactured and manufactured goods of £475,000,000–500,000,000, after very drastic reduction in the imports for the civil sector.

Lastly, there is petroleum. The imports will evidently increase substantially, and are limited only by tanker space. German investigators have analysed the consumption of petrol in wartime in great detail. The most reliable, Friedensburg,² estimates the annual expenditure of a first-class power in wartime at between 15,000,000 and 20,000,000 tons. Our own annual import is 11,000,000 tons, and even with the tremendous economies which can be made in civil consumption by rationing it is probably not too pessimistic to estimate our wartime requirements at double those of peace. This is the one point at which we must not err on the low side, for without petrol the war is lost, as we hope the Nazis will discover. Consequently, we will allow a petroleum import of £100,000,000. This brings the total import which is needed up to £925,000,000–975,000,000 a year, after the greatest possible economies. The value of

¹ Clark, *E.J.*, states that 15 per cent of investment goods, 20 per cent of exports, and 13 per cent of retail value of manufactured consumers' goods represents imported material. These percentages, applied to wartime totals in these categories, give total civil industrial import of £200,000,000–225,000,000. Complete exclusion of luxury imports and change in propensity to import, coupled with economy in use of imported material, should enable this to be reduced to £100,000,000–125,000,000.

² *Deutsche Volkswirt*, April 16, 1937. *Deutsche Wehr*, January 1936, estimated German requirements at 12,750,000 tons. Berthelot, a French expert, gives 12,000,000–15,000,000 tons for France.

our imports, measured at pre-war prices, will probably be very much the same as it was before the war.

From the shipping aspect, this is not necessarily serious. If we import shell steel and finished munitions, and if we exclude timber, wood-pulp and building materials, then it should be possible fairly comfortably to reduce the imports of industrial goods from 36,000,000 tons to something like 30,000,000. Food imports, we have seen, could be reduced from 21,500,000 tons to, say, 18,000,000. At this rate (excluding petrol) we should be importing half as much again as we imported in 1917. This is quite possible. There is more shipping available; the British, French and Dominion fleets are $7\frac{1}{4}$ per cent greater than in 1914, and the European neutrals have twice as much as they had then. The U.S.A. has four times as much, and although this shipping is not available for the Atlantic, it will release Allied shipping from other parts of the world. Moreover, modern ships have far greater carrying capacity per ton than the 1914 ships. By naval superiority we shall reduce our direct losses; by improved organization we shall reduce indirect losses caused by waste of time in convoy, etc. We shall have to rely to a greater extent upon neutral shipping than we did then—and that again raises the foreign exchange problem—but we should be able to handle the quantities of imports which are required.

The organization of shipping and importing is complicated in detail but straightforward in principle. The experience of the Shipping Control in the last war

shows what should be done, and the lines along which the Government is working look sensible. Evidently, the Ministry of Shipping should have control over all merchant shipping, in order that every ton of cargo space should be used in the most effective possible manner. The Ministry must determine which goods shall be imported and from which places. The task then becomes one of straight-forward organization, of piecing a tremendous jigsaw puzzle together. The question arises, of course, whether the ships should actually be nationalized, but in this as in the munition factories, the control—which implies the fixing of freight rates—is the real point. But this control of British shipping is not the whole of the Ministry's job. The Ministry has the delicate task of persuading neutrals to carry our goods at reasonable rates or even to sell us their ships. The Shipping Control in the last war showed how the services of neutrals could be obtained by shrewd persuasion.

Deciding what shall be shipped is more difficult. In the last war, the Ministry of Shipping allocated quotas to the other Ministries and to the private traders. In the circumstances of the time, it was probably right to deal with the import problem wholly from the shipping standpoint. But now that the Admiralty is confident of its ability to cope with the submarine, financial considerations may well be equally important. Consequently, the ultimate control of allocation of shipping quotas should not be in the hands of the Ministry of Shipping. In broad outline, it must depend

upon the relative scarcity of shipping and foreign exchange. It is a matter for economic planning as a whole.

In any case, of course, the control of imports must be centralized as far as possible. Responsibility for supplies of raw materials and munitions must be centralized in the Ministry of Supply, responsibility for supplies of food in the Ministry of Food. Private importers may be allowed in principle to get licences to import, but while the Ministries' supplies are unsatisfied, there will be no licences available for private importers. This will in fact look after itself. The Ministry of Supply will increasingly become wholly responsible for the supply of materials, and will purchase them in bulk, and the Ministry of Food will similarly be responsible for food. The uncontrolled sector of imports will automatically be reduced by the operation of these Ministries, by the imposition of import duties, and by the choking-off of the demand for non-essentials as the transformation of the industrial system proceeds. The difficulties will arise because of the conflict between the various Controllers rather than because of conflict between essentials and non-essentials. Conflicts of this kind can be straightened out within Ministries, but obviously in the last resort they must be referred to the supreme economic planning body, whether that be a Ministry or whether it be just the Cabinet.

Enough has been said to show that the foreign exchange aspect of our importing will be of tremendous importance. Indeed, we shall obviously have a large adverse balance of payments. The value of our imports,

at pre-war prices, is likely to be unchanged at best, so the problem of paying for them must necessarily become acute. In Chapter II, we suggested that exports might be expected to fall from the peace-time level of about £500,000,000 to about £350,000,000 at best, that invisible exports would decline, because of our dependence upon foreign shipping, and that we should consequently be faced with an adverse balance of some £400,000,000 at pre-war prices. This would probably be more in fact, because the terms of trade tend to move against us in wartime. Moreover, in a general rise in world prices, our assets do not appreciate in value in the same proportion, so consequently the higher "money" value of the adverse balance would be a higher "real" value as well. It is obviously necessary, for this reason as well as for the other reasons mentioned in the earlier chapter, to make every effort possible to maintain the export trade.

There is no reason to doubt our ability to find buyers for our exports. If the seas are open to our imports, they are also open for our exports, and only a relatively small proportion of our exports is sent to places which are inaccessible. We may expect to lose ground in the Far East and in Central Europe. But these are not important markets. Nearly 50 per cent of our exports in 1938 went to the Empire, and 12 per cent went to North and South America. A further 18 per cent went to Scandinavia, Belgium, Holland and Switzerland, Spain and Portugal, and France. Care will have to be taken, of course, in the supply of

European neutrals, but at worst it will be only necessary to restrict them to their peace-time purchases. We may say that four-fifths of our pre-war markets, at any rate, will be open to us. The difficulty is to find exports to send, rather than to find places to send them to. Metal goods in the widest sense¹ account for as much as 38 per cent of our total exports, and the industrial capacity needed for their production is already bespoken. Coal accounts for 7 per cent, and textile goods for 24 per cent. That is to say, these three groups comprise nearly 70 per cent of our export trade.

This suggests an interesting possibility of combining an expansion of exports with the useful long-term action of retaining the non-essential industries in existence. Cutlery, hardware, distilling and some sections of the clothing and textile industries could be rescued from inanition in wartime if they were enlisted into an export drive.¹ The coal trade and the textile trades generally should of course be encouraged to export as hard as they can. But what would be most acceptable to the South Americans, for example, would be metal goods. A stage may arrive in the war at which priority in materials for export may have to be granted equally with that for the war sector. In Germany, of course, that happened from the beginning of the Four-Year Plan. Indeed, it may be necessary for us to subsidize exports in the German manner. In

¹ The Ulster linen industry has already stopped production for the home market, and is concentrating exclusively upon exports—a good example of this.—*The Times*, November 14, 1939.

Scandinavia, for example, British coal is in direct competition with German coal, and should therefore be subsidized as part of the economic war. But outside Europe, this policy will probably be unnecessary. There will be less difficulty in finding markets than in finding resources which can be released from the production of war material. Organizationally, the need to push exports implies the granting of high priority to exporting industries and the organization of exporters into associations. In peace-time, the Government was working along those lines in order to negotiate trade agreements with Germany: for the positive task of organizing exports, it is even more urgent. Much of it will be done anyway in the big industries, for producers will have to work in associations rather than as individuals. The Federation of British Industries, in its offers to industrialists to find alternative suppliers for export orders if they are too busy to attend to them, has the germ of the right idea.

In any event, however, it is clear that there will be a big increase in the adverse balance of trade. How large are our financial resources for meeting it? If we could get credits, of course, there would be no problem at all at the present time. If the last war's experience is any guide at all, that problem would arise ten years later. But obviously if we can get credits we should, regardless of ultimate implications. Our prospects of getting them, however, are manifestly less favourable than they were last time. The American Neutrality Act cuts off the most promising source of supply, at any

rate for the time being, and it would serve our interests better for the neutrals as a whole to give no credits either to us or to Germany than to give credits to both. Suppose we cannot get credits, however, what should we do, and what reserves have we? The first line of defence, of course, is the gold reserve. One of the first actions of the authorities after the outbreak of the war was to transfer the whole Bank reserve to the secrecy of the Exchange Equalization Account, so there is no current knowledge of its magnitude. From the semi-annual statement of the Account, it is known that at March 31, 1939, the reserve both in the Bank and in the Account totalled 79,950,000 ounces. At the current rate of 168s. an ounce, this is equivalent to a reserve of nearly £670,000,000. This figure no doubt over-estimates the actual reserve, for there has been a substantial outflow of gold since March 31st. But when war began there was surely enough to finance a deficit of the size we contemplate for eighteen months.

The second line of defence, after the gold reserve, is the British citizens' holding of foreign securities. These have already been registered, of course, under decrees issued at the end of August. The Treasury is now in a position to buy them from their holders at the current market price. It is very difficult to say how large this reserve is. Sir Robert Kindersley, in his estimate of the British overseas investments in 1937¹, gives a figure of £3,753,000,000. This, however, is the par value, and is not necessarily very relevant. It is certainly consider-

¹ *Economic Journal*, December 1938, p. 630.

ably higher than the present market value. In any case the total of foreign investments is much less relevant than the total of investments which can be sold to Americans, to Scandinavians, to Dutchmen, and to Argentinians, or which these neutral suppliers will take as collateral for trading credits. From this point of view, many of our foreign investments are worth very little. How large are our realizable foreign assets? According to *The Economist*,¹ the market value of United States and foreign securities held by insurance companies and investment trusts is of the order of £200,000,000 and the private holdings of dollar securities are of the order of £125,000,000. These estimates exclude securities in foreign railway undertakings, which are manifestly unsaleable. This is a useful start. In the mobilization of foreign investments which took place in the last war, these were of key importance. The total amount of securities handled under the scheme was £622,600,000, of which £284,550,000 were dollar bonds and shares, and a large proportion of the remainder represented sterling obligations issued by United States concerns.

The next big block of holdings is the investment in Dominion and Colonial Governmental and municipal stocks. According to Sir Robert Kindersley, the nominal amount of these is £1,089,000,000, of which some could presumably be sold to the United States. The Americans, however, already hold some £65,000,000 of Australasian Governmental securities, and £200,000,000 of Canadian Governmental, provincial and municipal

¹ August 12, 1939, p. 312.

securities,¹ and their capacity to take more, even if such re-issue of existing securities did not conflict with the Neutrality Act, must necessarily be limited. There would be more promise in the disposal of industrial investments—especially of mining securities—in the Dominions. South African gold shares, Rhodesian copper shares, Malayan tin shares would obviously be highly attractive to the American investor, and as long as control was retained in this country such purchase would not be objectionable. Indeed, it might be definitely desirable in the long run as an encouragement to American co-operation in the work of reconstruction after the war. Any project for the internationalization of raw materials, for example, would be greatly eased if the Americans had a greater financial interest in the sources of supply. The market value of the mining capital quoted on the London Stock Exchange is of the order of £700,000,000, according to *The Economist* article. Some of this would obviously be available for mobilization. Similarly, some of the shares in plantation companies might perhaps be sold or pledged.

In addition to this, of course, there are all sorts of other securities which could be used for these purposes. Certain British industrial companies' subsidiaries in the United States could, for example, be sold. Electrical power and transport undertakings in neutral countries and within the Empire could be sold. The total amount

¹ *The Problem of International Investment*, Royal Institute of International Affairs, 1937, p. 186.

of funds which could be raised by sale or pledge is of course wholly uncertain. But there is no doubt whatever that we could raise as much as the £622,600,000 which we raised in the last war. And, pressed, we could almost certainly raise much more. Including the gold reserve, we have realizable assets of £1,000,000,000—£1,500,000,000, and even greater potential assets which could be drawn upon if the situation became desperate. Even without credits, therefore, we have enough financial resources to run a three years' war of the scale of magnitude which is contemplated in this book. The peak in the financial pressure, moreover, will not be reached for at least the first eighteen months, so that in actual fact our resources are likely to be adequate for as much as five years' war. To attempt to draw recklessly upon them, of course, would be unwise. The sale of foreign assets is "living on capital" in the most real sense. But the fact that the assets are there is encouraging.

The technique by which the foreign exchange control is operated, the level at which sterling should be pegged, and similar questions of that kind are closely bound up with problems of price-levels and monetary policy generally, and will be dealt with later. Complete foreign exchange control is necessary in order to prevent the outflow of domestic capital, as well as to facilitate the financing of imports and exports. Foreign exchange licences must be issued to importers, be they Ministry of Supply and Ministry of Food agencies or private traders. Importers will consequently

have to obtain quota allocations both for shipping and for foreign exchange. This, of course, is the organizational consequence of the conflict between the shipping aspect of imports in wartime and their financial aspect. Without the closest co-operation between the Ministry of Shipping and the Treasury, there will evidently be dislocation and duplication. In the last war, this question did not arise, for there was no foreign exchange control. In the new circumstances, it is plain that neither authority should be given ultimate control. The general principles upon which quotas shall be granted must necessarily be laid down by a supreme controlling body. Otherwise we shall probably get the best use neither from our shipping capacity nor from our financial strength.

CHAPTER SEVEN

THE BUDGET IN WARTIME

THE ECONOMIC revolution in the change-over to a war economy is most clearly seen in the Budget. In peace-time, the Budget is relatively unimportant as an influence in the national economy. The Government's function is to provide a number of essential services and to administer them, and to achieve a number of transfers of income between different classes of citizen. The essential services include the provision of arms, education, roads and so on. The transfers include payments of national debt interest, unemployment assistance allowances, old-age pensions, etc. In 1934-35, before the acceleration of rearmament began the revolution, the Government spent £735,300,000—or about one-sixth of the national income—of which at least one-half represented transfers of income between classes of the community.¹ The Chancellor of the Exchequer, in his annual Budget, levies enough taxation to cover this expenditure, choosing his taxes in the way which seems least likely to cause inconvenience to his Government. A Conservative Chancellor

¹ Clark, *N.I. & O.*, pp. 140-1, analyses the expenditure of the Government, local authorities and social insurance funds, and finds that in 1934-35 they took 24.5 per cent of the national income, of which 11.6 per cent represented transfers, 2.3 per cent debt amortization, and 10.6 per cent expenditure on public services and administration.

will tend to increase the proportion to be paid by indirect taxes: a Labour Chancellor will prefer to increase direct taxation. That, very broadly, is the way in which the Budget works in "normal" peace-time. Most up-to-date economists agree that the Budget should be used in peace-time as a positive weapon for controlling the trade cycle, for preventing slumps and checking booms. But in actual practice, the Chancellor invariably sets to work in the traditional way.

In the war, however, the structure of public finance is drastically changed. The Government becomes the decisive controller. Instead of representing the cost of running a limited number of public services and achieving certain transfers of income between citizens, the Budget becomes almost literally the balance-sheet of the nation's activity. The greater part of the national activity is work for the Government. Almost everybody's income becomes paid directly or indirectly by the Government. The Government is responsible for creating and spending a very large part of the national income. We have already estimated that the cost of the war sector alone will be some £3,000,000,000 a year at least. Then there is the cost of the civil supply services and tax collection, which in the current year is estimated at some £435,000,000,¹ and which can hardly be expected to decrease as the Government is

¹ The Revised Financial Statement for 1939-40, issued with the emergency Budget, estimates fixed debt charge at £230,000,000, other Consolidated fund services at £17,200,000, civil supply services at £442,491,000, and tax collection at £14,646,000, but announces economies of £20,000,000.

forced to undertake more services. The service of the national debt and other consolidated fund services are estimated to cost nearly £250,000,000 in the current year, and even on the borrowing at present envisaged may rise to £300,000,000. Moreover, the Government is doing a number of things which private industry normally does, and will have to finance them out of the Budget—for example, shipbuilding and factory building. It is difficult to see, therefore, how the war Budget can be less than £3,750,000,000 at the peak of the war and it may possibly be as much as £4,000,000,000. In other words, at least 60 per cent of the gross national income will pass through the Budget. And this, of course, does not include the Government's activities which happen to be autonomously financed—railway operation, war risk insurance, and the bulk purchases of the Ministry of Food and the Ministry of Supply.

In the extreme case of 100 per cent planning, this identity—apart from internal transfers of income—between the Budget and the national income becomes clear. The whole of everybody's income would then be returned to the Exchequer in one form or another. Part of it would be returned in payment for nationalized food, part for nationalized rent, part for nationalized clothing, and part for nationalized travel. All the rest would automatically return either in taxation or in payment for other nationalized commodities. If everybody's income is created by the Government, and if every commodity and every service is provided by the

Government, then everybody's income is paid back to the Government. In wartime, the simplest course would then be to ration everything, to distribute the rationed goods and services free of charge, and to pay no one any cash income at all. We shall not reach this state of complete communism, but we shall probably be nearer it in effect than we shall be to pre-war capitalism. If all the autonomously-financed Government operations were brought into the Budget, and if our payments for food and railway travel were regarded as taxes on retail sales of food and on passenger travel and were accounted in the Budget accordingly, then we should be in a position in which the Government was creating and collecting through the Budget some 80 per cent of the national income.

As things are likely to be, the Government will be handling about 60 per cent of the national income through the Budget. Whether it collects the money by taxation or by borrowing, it still collects 60 per cent of the national income. What are the principles upon which this collection must be done? The expenditure side of the Budget represents the expansion of the war sector—one aspect of the re-shaping of the economic structure—and the revenue side must represent the contraction of the civil sector. It is an arithmetical truism that the cost of expansion of the war sector must be balanced by corresponding reduction in the civil sector—subject, of course, to an increased total national income lessening the need for such reductions. If the Government maintained the total national income at

the maximum level envisaged in Table II, and if it reduced consumption and the private use of savings for construction to the extent shown in that table, and if it then took the remainder of people's income by taxation and borrowing, then it would automatically have the money to expand the arms sector to the required extent. That is simply a matter of arithmetic.

Whatever the Government does, therefore, this reduction of consumption and private use of savings will take place. If it does not take place, then it will be literally impossible for the Government to expand the war sector. But if the Government takes no steps actively to bring this about, then it will be achieved by inflation. Suppose the Government spends £2,000,000,000 on the war effort. This £2,000,000,000 becomes the incomes of all sorts of people—munition-workers, shareholders in arms factories, men who produce the raw materials for the munition factories, soldiers' wives, civil servants, and so on. It all becomes somebody's income sometime. This means that the public has £2,000,000,000 more money in its hands to spend. Moreover, less consumers' goods are being produced, for workers are being called up, and others are moving from civil work into the munitions factories. Therefore prices rise and there is inflation.

This, of course, reduces real purchasing power, and the necessary limitation of consumption is carried out. But it is carried out unfairly and unequally. The industrialist in an essential industry, or a holder of stocks of commodities, can increase his margin of

profit and so maintain his level of personal consumption. The munition workers and the railwaymen can demand higher wages as prices rise, and get them—thus maintaining their level of consumption. The people with fixed money incomes, and the workers who are in a poor bargaining position, the old-age pensioners and the soldiers' wives are left holding the baby. Their consumption is reduced by more than it need be. The reduction of consumption, therefore, is carried out inequitably and inefficiently. There is a real loss to the nation in strikes, which are caused in wartime only by increased cost of living. There is a real loss in that the demand for non-essentials is kept up by those whose real level of consumption is not cut. There is real loss of public morale. This is what happened to some extent in the last war. The Government failed to restrict consumption directly until the war was half-through, and then did so only half-heartedly. Prices and profits rose, and certain sections of the community maintained their standard of life while others suffered more than they should have had to do.

In order to avoid the inflationary process of reducing consumption, the Government must itself reduce consumption, by preventing the total consumers' income from rising. That is the function of taxation in wartime, and that must be the aim of conscious policy. To tax drastically in order to limit consumption inflicts less hardship and creates less injustice than a lenient taxation policy which leaves consumers to the tender

mercies of price inflation. To achieve this object, a quite different conception of taxation is required from the traditional one. A Chancellor who thinks in the old terms is a national menace in wartime, for with the best will in the world he will be unable to avoid inflation. We have seen that on the expenditure side, including Governmental capital expenditure on merchant shipbuilding, factory building and rebuilding of bombed property of the order of £300,000,000, the total Budget will not be less than £4,000,000,000 at the peak. If this is to be financed without inflation, the Chancellor must divert to the Treasury £1,700,000,000 of incomes normally used for consumption, £600,000,000 of incomes normally saved and used for private construction and maintenance, and £300,000,000 credit from foreigners, represented by the increased adverse balance of trade.

We can now begin to see how the Chancellor's programme should be shaped, in order to finance the war with the maximum efficiency and the minimum inflation. First of all, how should his collection of funds be divided between taxation and borrowing? In the economic sense, there is no immediate difference between taxation and borrowing, provided that the consumption and private capital expenditure are reduced properly. If everybody bought national defence bonds and national savings certificates to the value of £1,700,000,000, and reduced consumption by precisely the same amount in order to do so, then the immediate effect would be exactly the same as if the

money had been taken from them in taxation. In the long run, of course, the Government would be faced with the liability, and there would be an increased burden on the productive sections of the community in order to pay the interest charges to a growing rentier class. But there is no reason why the borrowing should be more inflationary than the taxation, provided that the funds borrowed are withdrawn from consumption and private capital expenditure. If one could be sure that the borrowing would take place at the expense of consumption, and would not in reality be financed by credit expansion, there would be something to be said for it. The incentive to produce efficiently in the non-controlled sections of the economy might suffer if taxation were so sweeping that no borrowing at all were required. For example, if industrial companies were forced to buy Government securities with their undistributed profits, instead of using them for new capital expenditure, the effect upon their incentive to produce profit would probably be less than it would be if their whole profit was taxed away. There is some case for borrowing on these grounds. But the long-term disadvantages are considerable, and consequently the Chancellor should rely as far as possible upon taxation.

It is obviously impossible to lay down a detailed programme in advance. But it is possible to suggest means of dealing with certain of the problems which arise. As we have seen, there are broadly three sources of funds which the Chancellor must tap. The first

is the reduction of consumption; the second is the transfer of the use of savings to the Government, and the third is the foreign balance. It is quite plain, of course, that the part of the Government's expenditure which is financed by the growth of the adverse balance represents borrowing. Either it consists of loans from foreigners—long-term loans or revolving commercial short-term credits—or it consists of the sale of British assets abroad. To the extent that it consists of credits these should be diverted to the Government, and represent an increase in the national debt. To the extent that it consists of the sale of British assets abroad, the position is rather different. What happens there, is that the Government buys British citizens' holdings of, say, American securities, and sells them back to America, getting munitions in exchange. This represents borrowing from British citizens, and not borrowing from abroad, from the Government's point of view. The seller could be given Government bonds to the capital value of his relinquished foreign holding, without any inflationary consequences at all. The only economic change which is made is that he has a British Government security instead of his American security. This is a capital transaction of the purest kind.

But how does the Chancellor proceed to reduce consumption and canalize private savings? The simplest plan to do both is to extend the principle of direct taxation. Obviously people will pay the tax out of the proportion of their incomes which is normally saved,

but if the tax rates are high enough, this does not matter very much. According to our estimates in Chapter III, the consumption of the "Over £250" group must be reduced by some 60 per cent, and that of the "Under £250" group by some 25 per cent. If we propose to tax away the proportion of their incomes which is saved as well, the part of the incomes which must be taxed away is even greater than that. How can this be done? Ideally, the results would be achieved by the operation of a graduated scale, by which the amounts left after taxation of the highest income-groups should be reduced by about 80 per cent or more, and the incomes of the lowest-income groups should be hardly affected at all.

The simplest idea is a vast extension of the income-tax machine. From all earnings, a certain percentage could be deducted at source, the percentage rising progressively. The procedure could be made very similar to that of collecting social insurance contributions. The employer would, in fact, be made responsible for paying the tax on the earnings of his employees. Allowance would have to be made, of course, for married men and for their children—in the absence of a general scheme of family allowances. This could be done at a flat rate, just as it is now done for income-tax purposes. The sort of tax rates which would be required to reduce the consumption of the "Under £250" group to the necessary extent would be some 10 per cent on earnings below £2 a week, 20 per cent on earnings between £2 and £3 5s. a week, 30

per cent on earnings between £3 5s. and £4 10s. a week, and 40 per cent on earnings over £4 10s. The scheme of graduation, of course, would have to be smoother than this, so that no one could possibly benefit by earning less. These taxes look very drastic indeed. But they are not nearly so drastic as would be the effects of a repetition of the 100 per cent increase in the cost-of-living which took place in the last war.

This principle of deduction at source, say at a flat rate of 40 per cent, could be adopted for all income payments—salaries, interest payments and dividends. The remainder would then be subject to income tax and surtax in the usual way, with the standard rate appropriately changed. It is interesting to note, however, that even the new rates proposed by Sir John Simon for 1940-1 would not be nearly adequate for the high incomes. Take, for example, the case of a married man with one child and an income of £10,000 a year. He would first pay £4,000—40 per cent deducted at source—and then a further £2,624 (the proposed tax on £6,000). This would reduce his net income to £3,376. But in peace-time his net income is £5,811, so this would represent a net reduction in the amount available for consumption and saving of only 42 per cent. Consequently, the income tax standard rate and especially the surtax rates would have to be geared up again very sharply in order to enforce the required reduction of consumption.

Draconian measures of this kind are certainly the most just means of effecting the tremendous reduction

in consumption. Progressive taxes on earnings are the only means of ensuring that the burden falls on those who are best able to afford it. Moreover, direct taxation leaves the public with the maximum knowledge of what it is paying—a good thing in a democracy—and the maximum freedom of choice in the way in which it spends what it has left. Again, the income tax and surtax are the easiest taxes to collect from the administrative point of view, and their consequences are most easily predictable. Even if the whole system were revised as suggested, the changes would be much easier and more easily controllable than any other new taxation system could be.

It will be argued, of course, that such taxation of incomes would defeat its own object and would result in such a decrease of effort that the war effort would collapse. But there is no evidence in the past to suggest that direct taxation has such a result. In peace-time the man with £50,000 a year has to pay 62 per cent of it to the Exchequer. But no one suggests that he expends less effort because of that. In the proposed plan, the man with £2,000 a year would have to pay something like 60 per cent of his income to the Exchequer. Why should his effort in wartime decrease, while the effort of the man with £50,000 a year does not decrease in peace-time, when there is no propaganda and no national call to sacrifice and work? Indeed, if people are having their standards of life seriously reduced, they are likely to work all the harder in order to maintain them as far as they can.

There are two other points which arise in connection with direct taxation. The first is death duty policy. Death duties are paid out of capital, so that from the point of view of restricting consumption there is little to be gained from increasing them. Some of the Government's expenditure, however, is capital expenditure of a real kind—such as the sale of foreign securities—and could well be balanced by capital taxation. Moreover, increased death duties have an indirect effect upon consumption, for they reduce the income from the estates. Consequently they could well be raised again. Less valuable, however, are capital levy projects in wartime. They do nothing to restrict consumption, and consequently are not a suitable form of tax for the immediate purpose of the economic effort. They are highly important, however, in the post-war period. In wartime, they are likely to have a disorganizing effect, and are not necessary if the war is properly financed.

The second point arises out of company taxation. Companies would, of course, avoid an increase in surtax rates, and consequently there would be a tendency for them to distribute smaller dividends in order to save their shareholders from taxation. This is a tendency which should not be discouraged: a very good way of restricting shareholders' consumption is to have their dividends curtailed. In fact, a law limiting the amount of dividend payable would be very reasonable. From the point of view of war finance, the more companies retain their profits the better. These undis-

tributed profits represent the bulk of the savings of the rich, however, and it is essential either that they should be taxed or that they should be invested in Government securities. Moreover, it is desired to check companies' allocations to maintenance and depreciation. Consequently, there would have to be smaller income tax allowances for maintenance and depreciation, and compulsion to invest in Government securities, even if there were not specific taxation of undistributed profits.

As for excess profit duties, they rather represent a desire to lock the door after the horse has gone. Their real function is to take away the profiteers' gain from war inflation: provided that there is no war inflation, there is very little useful purpose to be served by excess profit duties. If there are no energetic measures of taxation, of course, and if the war is financed wholly by borrowing, then tremendous profits will automatically be made and a rate of even 80 per cent—the highest reached in the last war—is not too much. If the financial policy is correct, the excess profits tax will yield little; but at the same time, it is worth having as a second line of defence

Suppose, however, that the Chancellor quails before the prospect of putting up the income tax and the surtax to the necessary height and of introducing a direct tax on wages. What else can he do? He must of course try indirect taxation. He must limit consumption by levying indirect taxes. The result will be, of course, that prices will rise to that extent, and so the real purchasing power will be reduced by the necessary

amount. The objection to this, of course, is that it sets up the same demands for higher wages and higher profits as inflation does. The relative advantage, compared with inflation, is that the Government gets the whole of the price increase, instead of the profiteer. There should in any case be heavy taxation of luxuries and semi-luxuries. A progressive tax on the number of domestic servants, a tax on hotel and restaurant bills, increased taxation of motor-cars, a tax on the sales of such semi-luxuries as furniture, hardware, pictures, fashion goods, cosmetics, patent medicines, advertisements, and dozens of this kind serve a useful double purpose. They provide revenue during the transition period, and they actively discourage the use of resources for the production of such goods and services. When the war effort reaches its peak, of course, these taxes will yield relatively little revenue. Their purpose will have been accomplished.

But would it at any time be possible to get a large and continuous revenue from indirect taxation? In many countries, there is a turnover tax. A tax is levied on every sale, both retail to the consumer and wholesale between industrialists or between industrialists and merchants. The Russian Government relies primarily upon such a tax, in order to finance its military expenditure, social services, and industrial expansion.¹ The German Government also derives

¹ Hubbard, *Soviet Trade and Distribution*, p. 206, estimates that one-half of the value of retail sales in the U.S.S.R. in 1937 represented turnover tax. The tax provides five-sixths of Government revenue.

large revenues from turnover taxes.¹ The tax is regressive, but has the advantage of providing admirable means of differential treatment of non-essentials. Its revenue-yielding power is great; a 1 per cent turnover tax in Britain, on German lines, would yield some £140,000,000 gross, although much of this in wartime would represent tax on Government contractors' turnover, so that the net yield might not be more than £75,000,000.²

More simple but more regressive is the tax on retail sales. This is less comprehensive than the turnover tax, and is easier to collect, but it bears more heavily upon the working class. A tax of a penny on each shilling's-worth of purchases would yield about £200,000,000. Certain necessities could be exempted from sales tax, in order to make the tax less regressive, and luxuries could be charged at a higher rate. This is no substitute, of course, for sweeping direct taxation on large incomes. But it might be a substitute for the direct tax on wage-earners' earnings.

We are now in a position to review budgetary possibilities as a whole. To a gross national income of £6,250,000,000 would correspond incomes of some

¹ In 1937, the yield was Rm.2,621,000,000, one-fifth of Government income. The rates on different types of transaction vary, the average being 1·34 per cent of total turnover. About one-fifth of transactions are exempt, the chief exemptions being in wholesale trade, financial transactions, railways, health services, public utilities.—*Statistisches Jahrbuch*, 1938, pp. 546-8.

² In Germany, the total turnover is 2·4 times net national income; at this rate, Britain's total turnover at the peak would be some £14,400,000,000.

£2,900,000,000 for the "Under £250" group, £1,300,000,000 for the "£250 to £2,000" group, and £900,000,000 for the "Over £2,000" group.¹ The remainder represents non-personal incomes—companies' undistributed profits, maintenance and depreciation, and certain Government income. The levy on earnings below £250 would yield some £500,000,000, if children's allowances of 7s. 6d. per child per week were deducted. The 40 per cent levy on earnings over £250, together with such additional direct taxation as would take 55 per cent in all of the gross income of the middle and 75 per cent of the well-to-do classes' incomes, would yield something like £1,400,000,000. Taxation of undistributed profits at a standard rate of 10s. in the pound would yield some £250,000,000. This group of direct taxes, therefore, would yield some £2,150,000,000. Together with luxury taxes and pre-war indirect taxation, this should provide at least £2,750,000,000. In this way, at least two-thirds of the cost of the war would be raised by taxation, whereas in the whole of the last war only 28·4 per cent was so financed. As for the remainder, the estimated increase of £300,000,000 in the adverse balance of trade should be diverted to the Exchequer, representing non-inflationary borrowing, the balance of undistributed profits should likewise be invested in new Government bonds, representing genuine savings, and certain other

¹ These figures are based upon Mr. Clark's estimates for distribution of personal incomes in 1929, adjusted for national income increase since then.—*N.I. & O.*, p. 109.

forms of private savings, such as insurance premiums, should also be indirectly diverted to the Exchequer. Even so, here would probably be some margin of inflationary borrowing, which would be necessary in order to ginger up the system outside the war sector,

Mr. J. M. Keynes's scheme for compulsory savings, expounded in *The Times* on November 14th and 15th, would equally secure the main objective, the reduction of consumption. The detailed scales which Mr. Keynes suggests are inadequate to limit consumption to the necessary extent at the peak of the war, but that does not affect the principle. Compared with direct taxation of earnings, the scheme has grave disadvantages. It involves a substantial increase in long-term debt. It creates political pressures in the post-war period which would almost certainly be detrimental. After the war, the middle class and the childless artisan class would cash their certificates, so that the Government would in effect be forced to spend upon them instead of on providing for the demobilized soldiers and the lowest-paid workers. But nevertheless the scheme is in some respects superior to direct taxation of earnings. It is much more palatable; it is probably the easiest way to induce people to accept direct limitation of their consumption.

Both this and the scheme for direct taxation of earnings have to contend with two difficulties. First is that of those people whose incomes have been heavily reduced by the war. If a man's consumption has already been reduced severely, it is manifestly

unfair to impose a further cut. The simplest way to settle this problem is to give a tax rebate equivalent to one-half of the difference between the wartime income after tax and the tax-paid income as it would have been if pre-war gross income had been maintained. Second is the problem of fixed commitments. In Chapter III we saw that it would be necessary to reduce rents and mortgage interest payments by one-third. As for the others, pre-war hire-purchase commitments will largely have been liquidated by the time the peak is reached in the war effort. Those commitments which represent saving, such as insurance premiums, could be largely freed from tax; the war effort gains nothing if insurance policies are surrendered.

It should be possible to provide rough-and-ready justice by these means. It is impossible to frame a taxation system in wartime which gives perfect justice to everyone. But compared with the social inequities of inflation, those of a system of direct limitation of consumption are relatively slight. The sacrifices are perhaps more obvious, but they are fairly distributed. It may be argued that direct taxation destroys incentive and initiative. But in wartime that does not matter, provided that the Government is energetic and vigorous, and public opinion is sufficiently aroused to the need for victory.

There is one more point. In Chapter III, it was suggested that the rationing should be accompanied by a free food scheme, financed by taxation. It is interesting to see just what this would involve. If

meat, bread, butter and margarine were distributed freely in this way, with a 10 per cent reduction in quantity and another 10 per cent in distributive cost (at least), the total cost would be about 8 per cent of the total of personal incomes. It could be financed, therefore, by a charge on earnings of 1s. 9d. in the £. Whether in view of the existence of a direct tax on earnings already the public would stand a further levy of this kind, even to get free food, is a matter of some uncertainty. But there is not much doubt that this would lead to big economies in distribution, and so would be in the public interest. Another possibility, of course, would be for the Ministry of Food to sell these necessities at artificially low rates and to recoup from the sale of semi-luxury foods. It may be, indeed, that the public resistance to direct taxation is so great, and its gullibility in not knowing when it is being taxed indirectly is so firmly rooted that subterfuges of this kind are more practicable than straightforward and just taxation.

The psychological aspect of taxation is very important. Any serious attempt to finance the war by taxation must expect to contend with severe opposition. Direct taxation of 20 per cent on earnings between £2 and £3 5s. a week, of 40 per cent on earnings of £5 a week, of 60 per cent on earnings of £2,000 a year and of 80 per cent on earnings of £10,000 a year would inevitably arouse the most widespread objection. Taxation on this scale should not be contemplated without careful preparation and intensive propaganda. The

propaganda itself is not difficult. The fear of inflation is very real, as the Labour Party found in 1931. Exploited by Lord Snowden and Mr. Ramsay MacDonald, it swept the country. On this occasion the Government would be right in asserting that the choice lay between taxation on this scale and inflation. As soon as the people realized that the alternative to having their consumption reduced in this way was to have it reduced by inflation, the struggle would be won. This, together with the call to sacrifice, should surely suffice. It would obviously be advisable to start the machinery going, with relatively small tax rates, in the 1940 Budget, and then to gear up the percentages to the necessary level in 1941, the peak year of the war effort. If that were to be done, the preliminary propaganda should be started now.

It would be prudent, moreover, to dress the scheme in the most attractive form. At the present time, the psychological effect of income tax is planned as badly as could be. The Chancellor raises the standard rate from 5s. 6d. in the £ to 7s. 6d. in the £. The impression is immediately created that the ordinary man will have to pay 2s. in the £ more. In fact, nothing could be more distant from the truth. The married man with one child and an income of £300 a year paid nothing before and will pay 1·8 per cent of his income in 1940-1. The £500-a-year man pays 8·6 per cent instead of 3·6 per cent. The £1,000-a-year man pays 19·9 per cent instead of 12·8 per cent. The £5,000-a-year man pays 40·7 per cent instead of 31·1 per cent.

The £50,000-a-year man pays 76·5 per cent instead of 61·9 per cent. Not until a man's income reaches £4,000 a year does the effective rate of tax become as much as the standard rate, and on the middle incomes the tax payable is very small, indeed. Discussion in terms of the standard rate makes everyone think he is more heavily taxed than he really is. The adoption of a percentage scale would be psychologically very much more acceptable. The British method is admirable if it is intended to prejudice public opinion against increases in taxation. But it is a very real obstacle in the way of substantial increases of taxation in wartime.

The pre-war tax machine cannot suddenly be changed into the powerful engine which is needed in wartime, and it cannot be allowed to remain as it is. New and much more vigorous principles of taxation must be introduced, and public opinion must be prepared for them by every means of propaganda which the Government can employ. It may even then be impossible to persuade the British people to accept the crushing taxation which is the only means of saving them from the grim effects of price inflation. But certainly the attempt must be made. The successful handling of the economic problems of war depends more upon this taxation policy than upon any other section of economic planning.

CHAPTER EIGHT

PRICES, MONEY AND PROFITS

IN THE shaping of the war economy, what part is played by the price system? In normal capitalist society, the working of the price system decides what goods are produced and how the economic resources are used. But in wartime, most of these decisions are taken by planning agencies. There is no free competition and no automatic adjustment in response to price changes. But nevertheless the money system is retained, so prices, wages and profits are obviously of first-class importance. They must be made to behave in the way which the Government requires for its re-shaping of the economic structure. The price, wage and profit levels must therefore be made to move in accordance with the Government's general plan. It may not be necessary positively to control them—although the Government is forced by public opinion to fix a number of retail prices in any case, and in its arms contracts virtually dictates the margin of profit which industrialists should be allowed to make. But prices must not be allowed to move in directions which would damage the working of the general plan.

One of the paradoxes about war is the fact that prices and profits command most public attention. But in reality they are much less important than budgetary policy. If a lenient budgetary policy is adopted, as we

saw in the last chapter, no control on earth can prevent a rise in prices. Moreover, no control can prevent profiteering: the only effective action which the Government can take is to impose a crushing excess profit tax. If the total of money incomes is increased, indeed, while the quantity of consumers' goods and services is reduced, then the level of prices *must* rise. By fixing maximum prices for certain necessities, the Government may check the increase in the cost of living. But it will not be able to check it for long. The prices of uncontrolled goods will soar, for people will have money to spend on them, their ability to consume or hoard essentials having either been sated or controlled by rationing. The increase in prices and costs in the non-controlled sector will react upon costs in the controlled sector, and so the pressure even upon controlled prices will become irresistible. The cost of living rises, and so the spiral of inflation works. It is rather like blowing up a rubber cushion. It is possible to put one's fingers firmly on a few points and hold them down during the process of inflation. But ultimately the pressure becomes too great. That was the practical experience of the last war.

Moreover, producers find more profit in uncontrolled products than in controlled, so they produce them, creating further scarcity of essentials and more pressure upon the controlled prices. In Germany in the last war this was particularly apparent. The price of bread was fixed, and production became unprofitable; there was a catastrophic fall in wheat production, and bread

became scarcer still, thus reducing the available ration and forcing up the maximum price. If the Government controls all production, of course, this latter result need not occur. But even the Government's costs will rise as inflation proceeds, and so the maximum price will be forced upward. Consequently, one cannot avoid the consequences of lenient budgetary policy by pegging retail prices. Direct reduction of consumers' incomes by taxation is the way to stop inflation.

If the right budgetary policy is adopted—that is, if consumers' incomes are directly reduced to the same extent as the volume of consumable goods and services—there will be no appreciable rise in the general level of prices.¹ If the Chancellor levies his taxation indirectly, of course, then prices will rise to the same extent as the levy, for consumers' incomes will not have been reduced directly by the necessary amount.² All prices will not remain the same as they were before the war. Some will rise and some will fall. But the general level will remain more or less the same. Consequently, there is no reason why the total of wages and the total of profits should rise. This suggests that a policy of wage stability, enforced if necessary by legislative sanction to agreements reached between employers' and workers' organizations, is the right

¹ Lowered qualities of goods should be reflected in their prices; if flour is reduced in quality, for example, a bigger loaf should be sold at the same price, or a lower price should be charged.

² War risk insurance premiums have precisely the same economic effect as an indirect tax levied on traders' stocks.

one for the planners to follow. Such an arrangement would prevent evasion of the proposed tax on earnings by collusion between workers and employers, and it would safeguard the workers against wage-cutting.

This wage stability, besides being tremendously advantageous for industrial peace, would definitely encourage workers to leave the non-essential sector and enter the war sector. Wages in the engineering trade are appreciably better than those in most non-essential trades, so workers will easily be attracted, once opportunity is provided for them. Moreover, the wage stability in the non-essential trades would prevent employers from maintaining their workers in employment by wage-cutting when profits fell. Consequently, the workers would be released for the war sector. There is everything to be gained from wage stability.

Thus one very important element in costs is fixed. How then should the Government's price policy be determined? The war sector, the essential civil sector, and the non-essential sector all require different treatment. In the war sector, the sole buyer is the Government. Its agencies also control all material costs, both for home and imported materials. It either sells the materials to the manufacturer and buys the finished munitions back again or produces the whole thing in its ordnance factories. Even if the manufacturer is not wholly engaged on Government work, the Government's insistence upon priority and price makes the effective position the same as if he were. In this sector, price means nothing except from the point of view of

accountancy. There can be no competitive price-fixing: the Government is a buyer with virtually unlimited purchasing power and police power. How then should the price be fixed? The manufacturer buys materials at a certain price from the Governmental agency concerned. By unification of accountancy throughout the section of the industry, the cost of conversion of raw materials into finished munitions in the most efficient plant is determined, and upon this the payment made to the manufacturer is fixed, his gross profit being greater the nearer he approaches the maximum efficiency. This provides an incentive to efficiency, and of course as the most efficient firm reduces its costs further, the price is lowered. This is straightforward enough—the important principles are uniform costing and price based upon the best practice and not upon the average practice.

But there are problems of economic choice to be made, and either price considerations must help in their solution, as they do under capitalism, or alternative principles must be devised. Consider, for example, the problem of choice of constituents of aircraft steel. The final choice depends to some extent upon the relative prices of non-ferrous metals. Under the war plan, the specification is standardized throughout the aircraft industry, to achieve the full benefits of standardization. In the war conditions, however, it is found that the pre-war relative prices no longer apply. The supply of chrome, say, may for some reason become difficult. There is a sharp rise in its price on the world

market. Now if this happened under conditions of free capitalism, the reaction would be automatic. The special steel-makers would quote higher prices for chrome steels. The aircraft-makers would immediately proceed to substitute new specifications including less chrome. The first substitution would evidently be worth doing, and so would the second, and so the process would go on—at any rate in theory—until it was a matter of financial indifference whether further substitution took place or not. A new equilibrium would be established, with chrome cheaper because the demand for it had fallen, and the substitute metals dearer. The aircraft steel would be cheaper than it would have been if the makers had stuck to chrome.

Problems of choice of this kind arise repeatedly. How would they be solved in the planned system? In this case, the non-ferrous metal controller would foresee a shortage of chrome. He would then stop deliveries for non-essential and low-priority work, thus ensuring continuity of supply for the aircraft industry. He would notify the engineers, and the new specification would be determined. The special steel makers would start producing the new alloy. The extent to which substitution would take place would depend to a considerable extent upon the relative prices of the materials, and would be decided arbitrarily. Provided that everyone was wide-awake, the results in speed and efficiency would probably be at least as good as they are in practice in capitalism. There would be no dislocation in the supply for high-priority work, and standardiza-

tion economies would be retained throughout, first on the old basis and then on the new. These advantages probably outweigh in real cost the disadvantage of inability to determine the exact point to which substitution should be taken. In nine cases out of ten in heavy industry under capitalism, the choices are actually made in similarly arbitrary ways, for they are made in conditions of monopoly or very imperfect competition.

In the essential civil sector, the position is rather different. There must be something like a free market in consumers' goods, even when there is rationing. First of all, imported supplies of food are all handled by the Ministry of Food, and the prices of home-produced agricultural products are fixed. The prices of rationed goods may be controlled as in the war sector.¹ The distributors' margin may be fixed according to the costs of the big undertakings—the co-operatives and the multiple stores. If the small shopkeepers are unable to distribute at that cost, then they should be forced out of business. This process for rationed goods is simple. The quantity to be sold is known, and no difficult economic problems (as distinct from accountancy problems) arise. For other essential goods which are not rationed, the same process is possible. Standardized clothing and boots, standardized soap, and certain essential foods which it is not considered necessary to

¹ Pricing according to the cost of the most efficient plant would revolutionize the price structure of some important foods. Profit margins could be very substantially reduced without inflicting hardship on the shareholders.

ration can all be handled in this way. If the prices of these non-rationed but controlled goods are fixed according to costs, the possibility might arise of the effective demand exceeding the supply. In the normal capitalist world, this results in immediate increase of price. In the war economy, the symptom of this would be shortages, and the planners would then either ration or at once produce more if there were resources available for doing so. The Government in fact takes complete control over the whole thing.

It would be neither wise nor necessary, however, for the Government to take over the whole job of supplying consumers' goods. Monopolistic control gives the best results in the supply of necessities and near-necessities, the demand for which is not subject to the vagaries of consumers' choice. Control of these necessities is essential both in order to achieve the economies of standardization and large-scale production generally and also to stop profiteering. But outside this range of necessities, the economies of large-scale production are negligible and there is no danger of profiteering, for the competition between the different capitalists who are all endeavouring to persuade the consumer to spend the last tenth of his income on their goods will suffice to keep down the profit margin. There is no reason, indeed, why the Government should take over the supply of everything which consumers will be able to buy when the war effort reaches its peak. Even then, there will still be some margin of consumers' spending on products which are not absolutely essential.

Outside the range of controlled products, the Government should exercise no control at all. There is no point whatever in fixing a maximum retail price without being ready to take responsibility for the whole process. The straightforward plan is to allow the price system to work without obstruction. The manufacturers would have to buy their materials from the Ministry of Food or from the Ministry of Supply, or from the agricultural marketing boards, but from there to the consumer there should be no interference. This applies both to uncontrolled goods in the essential civil sector and to the non-essentials. The only difference between these classes lies in the fact that budgetary policy would definitely discriminate against the non-essentials, by imposition of Excise duties, and the Government might also specifically prohibit certain non-essentials of such a conspicuous kind that their existence was damaging to public morale (such as motor-cars of more than a certain size and power). There is no reason to expect profiteering in these sectors, for consumers' effective demand for uncontrolled goods would be small, and competition to satisfy it would be acute.

The price structure in the transition is thus plain. In the war sector and in the controlled part of the essential civil sector, the function of prices would be one of accountancy and costing, and in that sense prices are used by the controllers to assist in solving problems of economic choice. Elsewhere, the price system would be allowed to work freely, modified by the control of primary food-stuffs and materials and

of course the control of transport. An important question arises, however, about the price at which the primary controls would release food and materials for various purposes. Take a concrete example. The Oils and Fats Control (under the Ministry of Food) should control oilseed imports and their manufacture into margarine, a controlled product. The oilseeds are crushed into crude oil. At this stage, there is a demand for crude oil for refining into margarine and cooking fats, and there are also demands for soap manufacture and for the manufacture of paint and linoleum. The Control gives first priority for crude oil to margarine and cooking fats, second priority to soap, third to paint and fourth to linoleum, a non-essential. It allocates the available supply accordingly. At what price should it sell these supplies? The simplest method is to fix a price, averaged over the whole supply, which covers the cost of the oil-seeds and the crushing—adjusted, incidentally, for the receipts from the sale of oil-cake to the Feeding-stuffs Control. This method has great advantages. It is straightforward and easily understandable. The Control would neither make a profit nor a loss. There is something to be said, however, for the alternative process of selling to the priority consumers at cost price and allowing the rest to compete in a "market." That method would certainly avoid the administrative difficulty of allocation of the remnant of crude oil among the linoleum manufacturers, and it would avoid the need for comparing the priorities of non-essentials. Also it would probably provide a profit

for the Control, which could be used either to subsidize margarine production or to relieve the Budget. For some materials, the first method would be better, and for others the second. Broadly, the larger the proportion of the demand which has high priority, the stronger the case for using the first method, and *vice versa*.¹

A price structure of this kind would certainly not provide opportunities for increased gross profits. In the war sector and the controlled sector, the profit margin would be low. Determining profits in accordance with the costs of the most efficient plant would certainly keep profits down. In some of the controlled industries, moreover, the profit margin is so great that even the profit allowed to the most efficient plant would be much lower than that of peace-time. In the non-essential industries, the possibility of large profit is small, and in the uncontrolled essential industries and services there would be enough competition to ensure a low profit margin. On the whole, therefore, there would be no reason to expect large profits provided that the right budgetary policy were followed. If an inflationary position is allowed to develop because the Chancellor

¹ In the last war, the Wool Control (for example) adopted the second policy. It purchased the entire Australian and New Zealand wool clip at a fixed price for the duration, sold to Government contracts and Allied Governments at cost, plus an administrative charge, and sold the rest in the market, both to domestic and foreign manufacturers. The net result was a profit of £60,000,000. Government profiteering at the consumer's expense is one way of financing the war without direct limitation of consumption; it is analogous to indirect taxation.

is not courageous enough to tax, then there will be profiteering on a big scale. But then maximum prices, anti-profiteering laws and excess profit taxes will not be enough to prevent it.

If the Chancellor is courageous, the only thing which would create a substantial rise in prices would be a big increase in the prices of imported food-stuffs and materials. Even at this point, however, we should be realistic. There is no physical reason why there should be a serious increase in food prices. Firstly, a rise of 30 per cent in the cost of imported food-stuffs would increase retail food prices by only 10 per cent—and the rise would be smaller if the profits of grain-milling and sugar-refining were cut down, and if all the bakers were as efficient as the co-operative bakeries are. Secondly, it is difficult to see where there could be an increase in the world demand for food. Britain and France take less food-stuffs in wartime, the neutrals are restricted to their peace-time consumption, and Germany takes none from the non-European markets. Freight rates rise, of course, for shipping is genuinely scarce. But elimination of non-essential imports, and control of shipping from the start should ease that position. The Minister of Food should be in a good position to drive hard bargains with the overseas suppliers, if he bides his time.

The position of materials is rather different, for world demand must increase. Britain and France import more, and amply compensate for the lack of German imports. The United States recover, and this

always means high material prices for Europe. The demand for these materials, moreover, is very inelastic in wartime, so the absorption of stocks must lead to a sharp rise in prices. It is possible, however, to increase the production of materials rapidly, and most of the important materials are controlled to some considerable extent by Britain and France, so that the upward pressure on prices could be relieved fairly quickly. But some increase in the price of imported material is inevitable. The terms of trade move against us, and the adverse balance of payments grows.

This is the point, of course, at which our foreign exchange policy becomes important. In Chapter VI, we left the foreign exchange question rather in the air. Machinery is required for the complete control of the foreign exchanges and for the complete insulation of the domestic economy. The technique for this is already well-established, and after a rather indifferent start the Treasury has now succeeded in closing the loopholes in the scheme, and has made exchange control effective. But what policy should be adopted for sterling itself? Should the level of sterling be pegged at some wholly fictitious rate, like that of the mark, or should the Treasury peg sterling at the sort of level at which it would stand if the market were free? The Treasury, pegging sterling at \$4.02-4.04, is adopting the second policy—and that policy is probably right, in view of the need for maintaining London's position as the world's financial centre for as long as possible. But the policy is nevertheless not without its dangers.

"Natural" considerations, indeed, should not be allowed to stand in the way of internal price stability and the most favourable possible terms of trade. If there were a world-wide inflationary price movement, while Britain continued to finance the war by non-inflationary means, the "natural" policy and the planners' policy would be the same. The right plan would be simply to allow sterling to appreciate in terms of other currencies, so that the sterling price of commodities would be unchanged, and there would be no pressure upon the internal price level. But if the war were financed in London by inflationary borrowing—which is rather more likely—the two opinions would conflict. The "natural" school would favour the depreciation of sterling, and the planners would oppose it. The point is, of course, that when imports are planned by priorities, and are reduced to the minimum consistent with winning the war, then currency depreciation has none of its peace-time corrective effect upon imports. Depreciation would of course help exports, but they could be helped much more cheaply and effectively and with more discrimination by straight subsidy. If we were involved in inflation, indeed, then the "natural" policy would have to go by the board. The more inflationary the internal policy is, the more planning will be required, and the less successful will it be. That conclusion runs through the whole analysis of the economic problems of war.

So far we have argued in terms of physical concepts—of switching quantities of man-power from one

occupation to another, of reducing the volume of consumption by taxation, of fixing prices and wages so that certain expenditure of labour will be able to buy certain quantities of essential foods, and so on. These quantities are expressed in money terms, naturally. But it is tacitly assumed all through that the essential determinants of Governmental policy are physical ones, and that if the "physical" policy is right, the rest follows as a matter of course. Our economic system, however, is a money system, and it is clear that credit and monetary policy are important in the achievement of the physical objectives. If the banks adopt a violently expansionist lending policy, then nothing will be able to stop price inflation, even if the Chancellor's Budget policy is impeccable. If on the other hand the banks vigorously restrict credit, then incomes will be reduced, unemployment will grow, and resources will be wasted. Banking and credit policy as it were provides the grease which keeps the system working, and on it much depends.

In principle, the right credit policy in wartime is very much the same as the right credit policy in peacetime. By all the devices to which we have become accustomed in the last few years—low interest rates and open-market operations by the Bank of England—credit should be expanded until effective full employment is reached. At that stage, further creation of incomes by the credit system would be definitely inflationary, and stringent control would be needed. To achieve such control requires co-operation between

the Bank of England and the joint-stock banks, but that should be easily obtained. At that point of full employment, the object of credit policy would be, broadly, to maintain a constant volume of credit. Probably it would be desirable to have a gentle increase in this volume of credit, and of course if the Government were not covering the whole of its expenditure by reduction of consumption and diversion of saving into Government bonds there would be this gentle expansionist movement all the time.

In the preliminary period before full employment is reached, there is no justification whatever for any increase in interest rates. If investors wanted liquidity above all things, and attempted to sell their long-dated securities, the Government could always satisfy their requirements by buying the long-dated ones and selling them more short-dated securities. The Government should simply go ahead, financing its current debt by expanding the Treasury bill issue, biding its time until investors have tired of getting no income on their money and are willing to take up a long-term loan. Sometime the investors are bound to settle down and seek long-term investments. In the meantime, the Government should avoid any action which might lead to increased interest rates.

When the point of full employment is reached, taxation becomes more important than borrowing, for then the transfer to the war sector and the imposition of crushing taxation begin in earnest. But even at this stage, there is no reason why interest rates should be

allowed to rise. If a real inflationary movement got under way, of course, then restriction would become necessary. But otherwise the authorities should continue as before, approaching the investor for funds only when an offer corresponded with the state of the investor's desire for liquidity. If the investor were unwilling to take a long-term loan, then the Government should continue to finance its deficit with Treasury bills. It is only common sense to keep the interest rate as low as possible, for not only does this reduce the cost of service of the national debt, but a generally low level of interest rates would appreciably diminish the cost of the arms programme as a whole.

The question arises, however, of competitive demand for what savings were available. Would not other borrowers come forward and force the rate of interest up against the Government? The answer is, of course, that direct prohibition of this is possible, and is already being operated by the Capital Issues Committee. But in any case, strong competition for available savings is not likely. The taxation programme and the general limitation of consumption must automatically check the demand for capital for non-essential purposes, and demands for essential purposes will almost entirely be under Government auspices anyway.¹ More important is the need to canalize the savings that never normally come to the market at all—the savings which companies

¹ Local authorities' demands for capital should evidently be supplied through the Government: they arise primarily because of A.R.P.

make in the guise of undivided profits, the savings made through insurance companies, and so on. As we have seen, it might be necessary to compel these organizations to take up new Government loans. But even there the companies will be likely to do this anyway. The Government controls over production and the destination of raw materials will prevent them from doing anything else.

Similar considerations apply to the suggestion that the Government, *via* control of the banks, should introduce some qualitative control of credit, which would directly encourage the reshaping of the economic structure along the required lines. The banks, it is argued, should refuse to make advances to non-essential concerns, or should give advances at especially low rates to firms in the war sector. This policy appears to tackle the problem at the wrong end. If the basic budgetary and priority policies are right, then the demand for bank advances will fall into line. A further duplication of priority schedules and discrimination would make added complication.

Bank advance policy represents a valuable second line of defence. It is particularly useful for preventing individuals from paying their taxes by bank advances, and so from maintaining their consumption. It provides an important check upon the efficacy of the key controls, and in the initial stages in particular, before those controls are properly under way, it must be relied upon to some extent. But it must always be remembered that a large section of industry is wholly independent of the

banks for its short-term financing, so that the first-line control cannot be imposed by the banks. The financial machine should have no responsibility for directly reshaping the economic structure. That is the concern of the controllers of industry, foreign trade and the Budget, and to duplicate their work is to create additional and unnecessary complication.

This does not mean, however, that the banks must be allowed to carry on independently of the Treasury. The nation's financial policy must be clearly and plainly co-ordinated with the other policies. But it does mean that no initiation of major policy should be done through the credit system as such. From the organizational point of view, the only necessary change is a clear understanding that the Bank of England works under the instructions of the Treasury and that some form of liaison should be created in order to ensure that all the joint-stock banks follow the same policy and that that should be the policy directed by the Treasury. If this is done, then there should be no technical financial difficulties in the way of the basic policies which the various Governmental agencies will pursue.

CHAPTER NINE

GOVERNMENT CONTROL

THE DISCUSSION so far has been concerned mainly with the objectives which should be aimed at and the policies which should be adopted rather than with the form which Governmental organization should take. Making paper constitutions is easy: making policies is more difficult. From the analysis of policy, however, a number of clear pointers to the right organization appear. The first is the need for a complete and co-ordinated plan. Budgetary policy, monetary policy, priority policy, price policy, foreign trade policy and man-power policy must all move together smoothly, otherwise there is bound to be dislocation. Once the decision to plan has been taken—and there is no alternative in wartime—the planning must be comprehensive. If there are as many plans as there are Ministries, then there will be chaos.

This need for a plan appears in two different ways. There must first of all be some means of reconciling the conflicting interests of different Ministries. The Ministry of Food and the Ministry of Supply compete for the use of shipping space. The Board of Trade, responsible for export development, has claims for raw material priority which the Ministry of Supply, intent upon expansion of munitions production, will dispute. The

Treasury and the Ministry of Shipping are in continuous conflict about import policy. All the economic Ministries have conflicting demands for labour which the Ministry of Labour must somehow resolve. The economic system cannot be divided into separate compartments, each independent of the rest. Consequently, there must be machinery for settlement of inter-Ministerial disputes, and someone must establish the basic principles upon which these disputes must be settled.

But this is not nearly enough. If the Ministries all formulate their own policies, and if the co-ordinating machinery comes into operation when two Ministries come into conflict, then there is manifestly no central planning at all. A number of inter-departmental committees are formed for specific purposes, and the problems are solved empirically as they arise. At best, the right policy is adopted only after the independent plans of the Ministries have in practice been shown to be incompatible. At worst, there is delay and dislocation which may lead to serious economic loss. Organization of this kind cannot result in smooth and cohesive economic planning. The resolution of conflict between Ministries' plans is important. But it is not nearly as important as initial co-ordination in the preparation of these plans. The analogy with the armed forces is exact. There must be tactical co-operation between the army, navy and air force. But the plan to which each Service works must be formulated by the General Staff. Similarly, the line of policy of each economic

Ministry must be laid down by an economic general staff. There must be one master plan, to which everyone must work.

The Government's plan for economic co-ordination was announced by Mr. Chamberlain on October 9th. There is a Cabinet Economic Committee, of which Sir John Simon is chairman and the economic Ministers are members. This committee is advised by Lord Stamp, who also presides over an inter-departmental committee consisting of the permanent heads of the Ministries concerned. The only staff which is available for the work of these committees is the Cabinet secretariat. This organization is a great deal better than nothing. It provides for the settlement of disputes, and it may also provide some positive co-ordination of Ministries' plans. But it has neither the personnel nor the staff resources to initiate or create. Sir John Simon is already overburdened with Treasury work. Even Lord Stamp is not working full-time on the job, and in any case has insufficient staff at his disposal to prepare detailed plans. Formulating an economic plan and supervising its operation is too great a task for one man, especially if he is not given the status of Cabinet rank.

This arrangement, indeed, is a very second-rate substitute for a fully-fledged Ministry of Economic Planning. Such a Ministry is advisable in peace-time for properly conducted government.¹ In wartime it is

¹ The Swedish Government, always five years ahead in economic policy, created such a Ministry on October 11, 1939.

imperative. It should be a small Ministry in numbers, with the strongest personnel available, inside and outside the civil service, and the most constructively-minded and energetic Minister in the Government. In this Ministry, the national plan would be created. The various Ministries' lines of policy would be laid down, and gradually the plan would develop and the whole economic effort would be co-ordinated. Supervised by this Ministry, all the economic Ministries would keep in step with one another, and the transformation to the war economy would be smoothly achieved. The Minister himself would be reasonably free from departmental duties, and so would be available to strengthen the War Cabinet and to ensure that economic matters would not be neglected—a very real danger when the War Cabinet contains only one economic Minister, and he the Chancellor of the Exchequer.

Under the plan, the function and policy of each Ministry would be clearly defined. The Treasury, of course, would retain its normal Budget-making function and its responsibility for credit policy, and would control the foreign exchanges. The Ministry of Supply would control all raw materials, all production for the war sector, and supplies of industrial material for the controlled part of the civil sector. The Ministry of Labour would control man-power, and would of course work all the time in close co-operation with the Defence Ministries and the Ministry of Supply. The Ministry of Food would control food imports, food distribution, food prices, and the controlled

section of food manufacture. The Ministry of Agriculture would control only domestic food production, and could possibly with advantage be merged into the Ministry of Food. The Board of Trade, besides its peace-time activities, would be responsible for exports. The Ministry of Shipping would control shipping, and the Ministry of Mines and the Ministry of Transport would control fuel and transport respectively. The Ministry of Economic Warfare would not fit into this clear grouping at all—it is essentially a fighting Ministry, concerned more with German economics than with British. But in so far as its work consisted of dealing with neutrals, it would obviously have to be in close contact with the Treasury, the Board of Trade, the Ministry of Shipping and the Ministry of Supply.

In this segregation of functions, clashing must be avoided at all cost. Duplication is wasteful in itself. But the main argument against it is not the loss of a score of civil servants' time. It is the bad impression which is made upon the public. The ordinary business man dislikes filling up forms at the best of times. If he is asked to fill up the same forms twice, he at once becomes annoyed and unwilling to co-operate. The success of the economic effort depends upon one hundred per cent co-operation from everybody, and a reputation for unnecessary bureaucracy is not easily lived down. In the last war, the duplication was such that there was widespread dissatisfaction among business men. There is a case on record in which one Department circularized a firm requesting particulars

of its weekly output from Friday to Thursday, and another Department required particulars of its output from Sunday to Saturday. The number of forms and controls must be kept down from the beginning, and consequently it is necessary at the outset to know precisely what the field of operation of each Ministry is.

The corollary of this, as it affects the present set-up, is of course the complete control of the Ministry of Supply over all war material. In an earlier chapter, the lack of logic in the present arrangement was pointed out. It is manifestly inefficient for there to be no less than five Ministries interested in the supply of war material. The Admiralty buys everything for the navy, the Air Ministry everything for the air force. The Ministry of Supply buys munitions and clothing for the army, the War Office continues to buy certain supplies, such as petrol. The Home Office continues to buy civil defence equipment. It is impossible effectively to mobilize industry on these lines. It appears that only the Ministry of Supply will issue priority certificates. But unless it has at its disposal the full facts and the full powers to use every factory as it likes (and not as the Air Ministry likes) there cannot be the clear and decisive action which is needed. The Government argues that these fields do not overlap. But all Ministries buy uniforms, and all Ministries buy metal goods. Anti-aircraft guns are purchased both by the Ministry of Supply and by the Admiralty. Machine-guns are purchased by the Air Ministry and the Ministry of Supply. Mechanical transport is purchased by at least

four of the five Ministries. And if we think in terms of materials and components and skilled labour, the overlapping is plain. To argue that there is none is grotesque. Even if there is no serious overlapping at the moment, the nation's industrial resources not being fully used, there is bound to be overlapping later on.

This gives the framework, so to speak, of the Governmental organization which is necessary in order to get a cohesive and vigorous economic effort. It would not be easy to effect the various changes and clarifications which are required. Vested interests exist in the civil service as everywhere else, and there are always strong forces against change. It is argued that the organization cannot be changed when it is already working, and that there would be great waste in making the change. That is all the more reason, however, for doing it at once. If the general argument is correct, then unified planning is essential, and it will of course become increasingly essential as the war goes on. When we get to the point of full employment, for example, inflation will be upon us if we adopt the wrong policy, whereas at the moment we can still adopt the wrong policy without decisively adverse effects. If changes will be necessary eventually, therefore, they should be done immediately, however inconvenient to vested interests those changes may be. The sooner we start clean, with the sort of organization which will ultimately be required, the better our prospect of getting through the difficult times ahead.

In the organization of Ministries which would come

under the aegis of the Ministry of Economic Planning, the functions and scope of the Treasury and the Ministry of Supply would differ most from their work in peace-time. The Treasury in particular would have to adapt itself to a much more positive way of thinking than is its custom in peace-time. The change there is not as much an expansion of duties as a difference of approach to the problems of public finance. In the last ten years, however, the traditional "Treasury view" has changed so much that the capacity for re-orientation obviously exists. Sir John Simon's speeches are vastly different from those of Mr. Chamberlain in his earlier years at the Treasury, and under stress of war-time necessity there is no doubt that the essential adjustment of mental attitude could be achieved, particularly under the influence of a forceful Minister of Economic Planning and an economic general staff with progressive economic views.

The building-up of the Ministry of Supply, however, is rather a different problem. The Ministry must do a great many jobs which have never been done before. It must control all raw materials—and this involves both organization of purchase from abroad and distribution among home producers. It must initiate a great mobilization of the country's engineering resources for the manufacture of aeroplanes and munitions and it must build new factories and supervise the existing national factories. In conjunction with the Ministry of Labour, it must press forward with vast schemes for the training of metal workers. It must

allocate between the factories the supplies of raw material and must give priority certificates for the use of plant. At least one-third of the workers in the country will be working under the control of the Ministry by the time the peak is reached, and probably more. This means a tremendous problem in organization: the biggest administrative machine in the nation's history must be built.

Within the limits of the present scope of the Ministry of Supply, this machine is being built. The scale upon which it is being built is perhaps not comprehensive enough. But at any rate the foundations are laid. At the raw material end, there must be a controller for each material, and a controller of the controllers—as there actually is at the present time. There must be a priority department, under general instructions from the Ministry of Economic Planning, which would grant priority certificates and would govern the policy of the raw material controllers at the distributive end. The experience of the last war shows that this is important. Much of the disorganization then was caused by failure to co-ordinate raw material controls. For example, the Ministry of Munitions controlled bricks while the War Office controlled cement. Licences to use iron pipes were issued by the pig-iron section of the iron and steel department of the Ministry of Munitions; licences to use tubes by the tube section; permits to manufacture metal-working machinery by the machine-tool department, and permits to use non-ferrous metals from the raw materials department. Obviously this time

this must be improved. Otherwise a manufacturer of bicycles might find himself able to get a permit for the use of steel tubes without being able to get one for rubber. The better the co-ordination, the less waste and the less trouble for the consumer. That is simple common sense.

In the form which these controls take, however, questions of high policy appear. Should the work be done by civil servants, or should it be done by the trade associations of the industries concerned? In its raw material control so far, the Government is using trade associations where it can. The iron and steel control, for example, is in effect being exercised by the Iron and Steel Federation; the timber control is being exercised in effect by the timber trade itself, and so on. It is obviously desirable to use the men who know about these materials. To instal in control civil servants without the necessary specialized knowledge is absurd. But at the same time, there are very real dangers in using the trade associations as much as they are being used. There is danger that the impartiality of the control may be open to question, and there is danger that vested interests unnecessary to the conduct of the trade in wartime will be kept in existence.

For example, the simplest way to handle timber control is for the control to buy timber in bulk from abroad, for the would-be consumer to apply direct to the control for his requirements at the control price, and for the control to supply those requirements (or to refuse to supply them) according to the priority of the

purpose for which they will be used. But if the control is dominated by the trade, it is inevitable that the organization will be much more complicated, for there will be an obvious desire to keep merchanting firms in existence and to find some function for them. In peacetime, it may be argued that the merchants fulfil a useful function by giving the consumer the benefit of their specialized knowledge of timber, and by financing the process of distribution, but in wartime this function ceases to exist, for the merchants can operate only by rule if they are allowed to operate at all, and the financing is all done by the Government anyway. The only result of the inclusion of the merchants in the scheme is to create more complications for consumers and to increase the price which consumers have to pay. The control needs the merchants' expert knowledge and personnel, and some of their organization; but that personnel should be merged into the control organization. The experts should be in the full-time service of the Government and should be required to sever their private trading connections. The control then becomes a complete monopolist trading concern, which does all the importing itself and sells direct to the consumer, subject to the priority schedule. The merchanting firms cease to exist—all that is best in them in expertize is merged into the control. That is the proper and efficient form of organization for material control.

At the other end of the priority machinery, there is much to be said for the use of existing trade associations. Suppose that it is decided, for one reason or another,

that the manufacture of toy engines should be continued and that the manufacturers should be allowed, say, one-third of their former supplies of raw materials. It would add greatly to the ease with which the machinery would work if the job of allocating the available supplies between the makers of toy engines were left in the hands of the relevant trade association. This would take a great deal of unnecessary administrative detail off the Ministry's hands, and the results would probably give more satisfaction than the Ministry's decisions could do. The trade association is used, in short, for matters which concern that trade alone. It should not be allowed to run publicly-financed trading organizations. That is the principle which should be adopted.

Similar questions arise in the organization of munitions production. The present method places executive control in the hands of a Supply Council of ten, which consists of two politicians, three public servants, four distinguished industrialists and one distinguished financier. This is sensible enough, on the face of it. Everyone agrees that experts must be brought in from outside. But the latter five are not being paid. The Ministry must share their services with the dozens of other undertakings in which they are interested. This is surely bad principle. What is required is the appointment of experts from industry and finance to devote themselves whole-time to the organization of munitions supply. The fact that they are well known in their respective industries itself inspires confidence among

industrialists generally, and convinces them that the Ministry knows what it is doing. Their knowledge and organizing ability, and their contacts up and down the country should be pressed into the job of expanding production. They should do that job as full-time workers for the Government with full responsibility. That must be the right way to bring in experts from industry.

At the same time, there must be very substantial de-centralization. In the last war, an attempt was made at the outset to handle everything from London, and the result was a perpetual complaint of bureaucracy and of lack of knowledge of local conditions. A civil servant or an industrialist working as a civil servant in London cannot possibly know the full potential of the engineering industry of, say, Loughborough. He is bound to under-estimate the possibilities of small firms, even if he is aware of their existence. In modern warfare, the danger of dislocation of communications adds to the necessity for regional administration. The Government has realized this, and is organizing the Ministry of Supply with regional officers. But it appears to be failing to attract local experts to this organization. The men who have been appointed as Area Officers are civil servants and Service men. From the point of view of the local industrialist or trade unionist, these men are so remote from local conditions that they might as well be in London. Better results could be achieved by bringing in local industrialists as Area Officers—men who know the region and know the

industry in that region. The Government has argued that the local experts should be used on the actual job of production in their factories, and that to take them into the organization would be bad for production. But according to this argument, no industrialists at all should be taken into the Ministry of Supply organization anywhere, and this vast production machine should be built without the aid of a single man who knows industry at first-hand. There are 997 engineering establishments in Lancashire. If a dozen of the best executives were taken out of these firms to mobilize the engineering capacity of Lancashire, it is very difficult to believe that production in the workshops would suffer appreciably. These men again should be full-time workers for the Government. Their job would be to build up the war sector in their areas.

The co-operation of employers' associations in the industries of the war sector is evidently necessary. The key to efficient production in wartime is the closest co-operation between the various undertakings, interchange of ideas, uniformity of costing, and so on. In the improvement of the actual productive process, the employers' associations have an important part to play. But they should have no executive control. The ultimate responsibility must rest with the Ministry of Supply and with the individual contractors and sub-contractors. The employers' association should appear in the structure in a consultative capacity, and not as executives. In the organization of exports, and in similar work of that kind not directly associated with

the war sector, the position is rather different. The employers' association is a convenient unit through which the Board of Trade can work. But in the war sector, full power must be in the hands of the Ministry of Supply, exercised by full-time workers with the greatest possible knowledge of the industries concerned. And the same should be true of those sections of the essential civil sector which the Ministry of Economic Planning decides should be controlled.

At this point, the question arises whether the war industries should be nationalized in the sense that ownership passes to the Government. From the point of view of war efficiency, the question is not very material. If the control is completely in the hands of the Ministry of Supply, it is not easy to see what would be gained immediately by nationalization. Four years ago, when the rearmament programme was just beginning, complete nationalization of the arms industry would have been an excellent investment for the nation. The expansion would have been financed a great deal more cheaply: the Government would have raised the necessary capital at, say, $3\frac{1}{2}$ per cent, whilst the earnings yield upon aircraft company capital was of the order of 10 per cent. An extraordinary state of affairs has been allowed to develop, indeed, in which the Government has been compelled to guarantee the aircraft industry against post-war redundancy of plant—and so take all the bad risks of the industry—without the economies of Government financing of these extensions which will prove redundant. But this is now

past history, and in wartime the advantages of nationalization are in fact secured, for the Ministry of Supply exerts full control. The level of controlled profits should be no higher than the compensation which the Government would have to pay to shareholders even if the plants were taken over. Consequently, there would not be very much economic advantage to be gained from nationalization at the present stage.

Whether after the war, the various controls should be removed or not is another matter, but it is too early to discuss this yet. There is no doubt that a sensible Government would retain much of this wartime machinery, and transform it into complete nationalization. During the war, it is desirable that all new arms factories should be national property, for in that there is immediate financial advantage for the nation, in that the cost of building them can be financed more cheaply. Moreover, it is desirable to have one national factory engaged on the manufacture of each munition product, in order to have a yardstick against which the privately-owned factories' costs can be checked. It would probably be convenient, too, to perform isolated operations of complete nationalization, in cases in which there was a fundamental conflict between shareholders' interests and those of the Government. If it were necessary to efficient operation to amalgamate two concerns, it would probably be desirable to buy them both, instead of imposing an enforced merger on the two groups of shareholders. In wartime, nationalization should be regarded as a matter of convenience

rather than as a matter of principle. In any case there is full public control, and that is much more important than ultimate ownership in wartime.

The next point to be considered is the organization of labour in the war economy. The logical policy is to make the Ministry of Supply responsible for the labour problems of the war sector and for the organization of the necessary training programme, as the Ministry of Munitions was in the last war. The Government, however, has decided that the Ministry of Labour should handle this, and in fact the Government is probably right. The Ministry of Labour has a vast quantity of specialized knowledge and experience, and contact with the trade unions and employers' organizations. It inspires more confidence than any other Ministry. Moreover, the man-power question is a much wider one than the labour problem of the Ministry of Supply. It includes reserved occupation listing, the attraction of new workers into the industrial system as a whole, the stability of wage-rates, the extension of hours, and a great deal more besides. There would be just as much clashing between the Ministries of Supply and Labour if the Ministry of Supply handled the labour problems of the war sector as there would be if the Ministry of Labour handled them. With its experience, moreover, the Ministry of Labour would probably handle them better. Consequently, the whole problem of man-power should be controlled by the Ministry of Labour. Obviously, there would have to be close co-operation between the two. But administratively that should be

simple, especially with the main lines of policy directed by the Ministry of Economic Planning.

The trade unions must evidently be consulted at each stage. In the national sphere, the existing machinery can and should be utilized fully. There, in three-cornered discussions between the Ministry of Labour, the trade unions and the employers' organizations, the principles of dilution must be worked out. In the regions, similar machinery exists. In the factories themselves, however, some further form of organization is needed in order to give the trade unions much more opportunity to initiate new methods of improving productivity, and in order to ensure that no single idea which any worker may have for an increase in output should be overlooked. Not enough attention has been given to the positive contribution which the trade unions can make. In the training centres, in particular, the trade unions must be given a very substantial say in the control. These training centres are a long-term menace to trade unions' rights, and consequently they should be adapted as far as possible to the unions' point of view. The engineering unions should have a place in the management of the centres. Moreover, the Ministry of Labour might well appoint distinguished trade unionists and experts on labour problems as full-time directors of these centres, in very much the same way as the Ministry of Supply draws in distinguished industrial experts for the organization of munitions supply. Obviously there will have to be a big expansion of the Ministry of Labour in order to

enable it to deal with its new tasks of planning, and there is no more reason why this should all be done by professional civil servants than that the expansion of the Ministry of Supply should be done exclusively by civil servants. But here again, of course, the people with ultimate control must be full-time workers for the Ministry, with no outside interests.

In the organization of the other economic Ministries, no new principle is needed. The import controls operated by the Ministry of Food should be operated in the same way as those of the Ministry of Supply—they should be straightforward trading organizations, operated by a mixture of civil servants and full-time experts from the trades concerned. Food manufacture—grain-milling, bacon factories, sugar-refining, and so on—should, when controlled, be controlled by the Ministry of Food. The productive processes are so different from those of the war sector that there is nothing to be gained from having this under the Ministry of Supply, and as the Ministry of Food also exerts control of distribution it is logical to have the same Ministry in charge all the way through. For sugar-refining, for example, the Ministry should take on full-time experts from Tate and Lyle, and should run the industry in precisely the same way as the Ministry of Supply runs the arms industry. There is no new point involved. At the distributive end, the Ministry operates rationing, and it would probably need to effect major changes in the distributive system as well.

The Ministry of Agriculture, with its wide experience

of planning agriculture, appears to be handling the problem of expanding home agricultural output very reasonably. In wartime, there is no new point of principle involved as far as this Ministry is concerned. There is a strong case for amalgamation with the Ministry of Food. There must certainly be extensive co-operation between them, for imports of feeding-stuffs would be controlled by the Ministry of Food, and the whole question of home food production in this country is ancillary to that of food importing. If there were no direct merging of the Ministries—and this is certainly the tidiest way to do it—there would obviously have to be a system of joint committees for the handling of all sorts of problems.

Some administrative difficulties appear in the control of essential civil manufacturing industries and exports. The imported raw materials are controlled by the Ministry of Supply, and these industries—such as the clothing and textile industries—would in any case be partially controlled by the Ministry of Supply because their output is required for the war sector. It would probably be best, therefore, for any control which is needed over the essential civil sector to be exercised by the Ministry of Supply as well. The Board of Trade must come in, however, as supervisor of exports, and possibly as controller of profiteering in finished goods, should that be necessary. The simplest plan would be to keep the Ministry of Supply in control as far as the end of the production process, and to allow the Board of Trade to take over from there if

it were necessary for anybody to do so. For the encouragement of exports, the Board of Trade would of course work through the trade associations, and schemes of pooling orders and sales personnel would have to be devised. The Board of Trade's function is to stimulate this—and if necessary to achieve it by compulsion—and to insist upon the allocation of due priority to exporters in the raw material controls.

The organization of the Ministry of Shipping is straightforward—here again there may be a case for outright nationalization of shipping, but control is just as good, unless the Government wished to subsidize shipping, in which case it would do well to nationalize it first. The difficulties in shipping are technical difficulties rather than administrative difficulties. The Ministry of Economic Planning, however, would state in general terms the relative share of shipping quotas to be given to food and raw materials, and then the Ministry of Food and the Ministry of Supply would work out with the Ministry of Shipping and the foreign exchange control how their global quotas could be used best. Finally, the Ministry of Mines and the Ministry of Transport must be fitted into the general structure. The Ministry of Mines would control fuel in very much the same way as the Ministry of Food would control food. The Ministry of Transport controls the railways, of course, and certainly some more comprehensive control of road and canal transport will be required as the war proceeds. The technical difficulties are considerable, but they will have to be solved.

This completes the brief survey of the organizational and administrative problems involved in the building of the war economy. The general principles, indeed, can hardly be disputed. Unification of planning and clear demarcation between the agencies required to carry out the plan, the reduction of the number of forms to be filled in to the minimum compatible with full knowledge and control, the use of experts on a full-time basis, drawn from the trades which are being controlled, the consultative value of trade associations, the importance of recognition of the positive functions which trade unions can perform—these are the principles upon which the organizational structure must be built. A clear policy can then be formulated, and can be put into operation with the maximum vigour and the minimum disorganization and waste.

CHAPTER TEN

THE FIRST SIX WEEKS OF WAR

SO FAR, the events of the first six weeks of war have been considered only incidentally to the main argument. It is too early to pass judgment upon the Government's actions as a whole, but it is nevertheless interesting to examine the effect which the war has had upon the economic structure, and to consider the lines of Governmental policy in the light of our previous analysis. The clearest impression one gets, looking back on these six weeks¹, is one of muddle. The outbreak of war plunged the economic system into acute uncertainty and dislocation. Employers in the non-essential trades, alarmed by the prospect of complete cessation of demand, dismissed workers ruthlessly and cut the wages of those who were left. Firms hurriedly left London, leaving behind them dismissed staffs. The black-out regulations, and the regulations preventing assembly of crowds, brought the entertainment industry to a virtual standstill. The evacuation schemes accomplished a greater shift of population in three days than normal economic forces had achieved in twenty years, and created correspondingly great

¹ This period marks clearly the first stage of the war; the imposition of Government controls, uncertainty and dislocations.

economic dislocation. The calling-up of territorials, reservists and whole-time civil defence workers destroyed spending-power. Debts were not paid, and landlords of middle-class properties found themselves with no redress against departed tenants.

In addition to this natural and inevitable confusion, business was paralysed by the flood of decrees which flowed from Government departments, as the Government's plans for the transition to a war economy were rapidly put into operation. A score of new controls were established, and skeleton organizations were hastily built into administrative machines. The Government made little apparent attempt seriously to acquaint traders with what was expected of them, and the machinery for the dissemination of Orders proved wholly inadequate for its purpose. Besides the confusion of the war itself, therefore, business men were hopelessly confused by the new decrees which they had to obey but the meaning and implication of which they were not told. Belatedly, on September 22nd, Sir Samuel Hoare broadcast an appeal to the public urging a return at any rate to partial normality, and appealed to employers to refrain from dismissals. Mr. Ernest Brown repeated this appeal in the House of Commons in the following week. But confusion continued.

The first result of the outbreak of war, therefore, was a sharp increase of unemployment. On September 11th, unemployment was 99,236 higher than it had been on August 14th. By October 16th, the number on the register had increased by 99,710 more, making 198,946

in all.¹ This unemployment increase, of course, was concentrated in the vulnerable areas and in the non-essential trades. In London, it was 110,244, and in the Eastern, Southern and South-Eastern districts 62,086; in the Midlands and North Midlands, on the other hand, unemployment fell by 33,664. Industrially, the increased unemployment was concentrated in hotel, entertainment and distributive services, in printing and in building. As the war sector expanded, there was a substantial fall in unemployment in textiles and in coal-mining, ship-building, iron and steel, and engineering. These unemployment returns probably underestimated the dislocation. One of the most striking facts about the disturbance was its incidence upon the professional and salaried class, very few of whom register at the Labour Exchange when they lose employment. Moreover, employment certainly fell by much more than the unemployment figures rose, for hundreds of thousands of men were mobilized for military service and civil defence.

The other striking indication of dislocation was the behaviour of prices. Wholesale prices behaved as they always do behave at the outbreak of war: there was a sharp increase all along the line. The depreciation of sterling, together with increase of some 60 per cent in freight rates, was sufficient to induce an advance in sterling prices. But the rise in fact was more than could be accounted for by that. Moody's index of the Ameri-

¹ These mid-October figures represented the peak; in the next month the total fell by 28,050.

can price of sensitive commodities shot up 20 per cent in the first week, and only the closing of some London markets and the pegging of others prevented similar jumps here. London dealings in copper, lead, and spelter, for example, were suspended altogether, and maximum prices were fixed for a wide range of provisions and materials, for the most part at or near pre-war prices. Even the controlled prices, however, were forced upward, and in the uncontrolled markets prices rose sharply. The price of mid-American raw cotton, for example, rose from 5·49d. on August 39th to 6·98d. on September 6th, but after falling back to 6·24d. on October 10th, forged ahead to 7·60d. at end-November. Rubber prices increased from 8 $\frac{3}{4}$ d. a pound to 10d. in mid-October, and 11 $\frac{1}{4}$ d. at end-November. Cocoa and coffee prices increased by one-third. *The Economist* index of wholesale prices rose by 9·2 per cent in September, 8·5 per cent in October, and 4·4 per cent in November, making a total rise of 23·6 per cent from August 30th to November 28th. Textiles rose most, food next, and mineral and metal prices rose least.

It was in the retail markets that the most extraordinary movements took place. The measures very rightly taken by the Government to divert shipping and to distribute stocks throughout the country led to local shortages, and prices soared. The introduction of the Government's compulsory war risk insurance scheme for commodity stocks provided an admirable opportunity for profiteering, and pre-war price lists

were rapidly adjusted. Retail food prices were brought under control, although the controlled maximum price was in many cases appreciably above the pre-war level. The Ministry of Labour cost-of-living index rose by 6.4 per cent in September, and a further 2.4 per cent in October, making 9.0 per cent in all, despite the controls. The advance was largely due to food prices, but the movement was very marked in the price of consumers' manufactured goods. The price of bicycles rose by 12 per cent, the price of hardware by from 20 to 25 per cent, the price of garden implements by 10 per cent, and the price of blankets by $7\frac{1}{2}$ to 15 per cent.¹ In A.R.P. equipment, such as gas-mask containers and materials for blacking-out windows, there were instances of shameless profiteering. I found one case personally, of a shopkeeper trying to charge 3s. 6d. for a gas-mask container (probable cost of production 3d.) which he had been willing to sell for 2s. the day before: containers were sold in the streets for 1s. 6d. which could be bought in a multiple shop for 1s. The traders' organizations did their best to restrict the increase of prices. But there is not much doubt that a great many bewildered consumers were swindled by unscrupulous retailers, and that a great many confused retailers were swindled by unscrupulous manufacturers.

Evacuation, loss of income, dislocation of supplies, urgent demand for certain goods for hoarding or A.R.P., attempts to forestall impending price increases created extraordinary movements in the country's

¹ *Financial News*, September 18, 1939.

retail trade. The value of retail sales in September was 13·9 per cent above that of September 1938. Most interesting, however, is the fact that sales in Central London fell by 27·5 per cent,¹ while outside London the increases ranged between 12·3 per cent in Scotland and 26·2 per cent in the South of England. With such divergences between different parts of the country, the difficulties which the controls confronted are apparent, and their failure to act effectively is not to be wondered at.

We have seen in the earlier chapters that such dislocation is highly damaging to the war effort. The reduction which must have taken place in the national income in September and October was extremely detrimental to the war effort, for besides reducing the nation's taxable capacity and its production, it had a most disturbing effect upon public morale. One had only to walk down a working-class shopping street in the morning to see how disturbing the effect could be, and in at least one public information bureau there was ample evidence of the effect which the dislocation was having upon the lives of the people. Some dislocation was, of course, inevitable. But a great many people were

¹ I am indebted to the John Lewis Partnership for particulars of the weekly sales of John Lewis and Peter Jones. Comparing with the corresponding weeks of 1937, and thus avoiding comparison with the Munich period, we find that sales fell by 52·5 per cent in the first week of war. There was then some recovery, the reductions for the next three months being 27·3 per cent, 16·9 per cent, and 23·6 per cent. In October, however, business fell off again, the weekly falls being 29·7 per cent, 36·3 per cent, and 38·6 per cent.

asking whether the Government was not in fact responsible for some of the dislocation, and whether it could not have stopped it by far-sighted action.

In the first weeks of war, the Government certainly showed unprecedented activity. Never before had there been such a spate of legislation and decree. The Ministry of Supply immediately took control of iron and steel, non-ferrous metals, aluminium, wool,¹ flax, hemp, jute, silk, rayon, timber, paper, hides and skins, leather, molasses, industrial alcohol, sulphuric acid, sulphate of ammonia and other fertilizers. New plans for the expansion of arms output were pressed ahead, and an authoritative Supply Council was set up. The Ministry of Labour took powers to prevent workers from moving from job to job, and discussions of means of increasing output were begun between the Ministry of Labour and employers' and workers' organizations. The Board of Trade took over shipbuilding, and initiated a plan for building standardized merchant ships. A Cotton Control Board was established, to control the cotton industry. The Ministry of Mines fixed coal prices and introduced rationing schemes for coal, gas and electricity; all supplies of petrol were pooled, and a rationing scheme was put into operation.

¹ The Wool Control was responsible for the most spectacular deal of the war; the purchase of the entire Australian and New Zealand wool clip for the duration. The total cost was about £52,500,000 a year, and the price about 30 per cent above pre-war, but only slightly higher than the average of the three previous clips. This purchase was enough to cover Allied needs for the duration.

The Food Defence Plans Department was rapidly expanded into the Ministry of Food, and full control was taken over prices and supplies of wheat, flour, meat, sugar, teas, oils and fats, butter, eggs, bacon and hams, condensed milk, potatoes, canned meat, dried fruits, and animal feeding-stuffs. An attempt to decentralize fish distribution failed, and was abandoned, but prices of herrings and kippers were fixed. The agricultural marketing boards were in effect nationalized, and orders were issued for the expansion of agricultural production. Plans were made for the introduction of food rationing, a National Register of the population was compiled, all retailers were registered, and a drastic Act was passed against profiteering.

Before hostilities began, the railways were taken over by the Ministry of Transport, but road transport was surprisingly left uncontrolled, except to the extent that its petrol supply was curtailed. By the middle of October, a Ministry of Shipping had been set up, and from the start arrangements were made for convoy. The Ministry of Labour organized a mobile force of dockers, ready to move from port to port as required. The Government took charge of marine insurance of war risks, and a compulsory war risk insurance of commodity stocks was introduced. A wide range of luxury imports were excluded, and the exports of certain foodstuffs and manufactured goods were allowed only under licence. The foreign exchange market was controlled from the start, and new capital issues were restricted. The Chancellor of the Exchequer introduced

an Emergency Budget, which as well as increasing direct and indirect taxation provided for a new Excess Profits Tax. Ten years' legislation was accomplished by administrative decree in six weeks.

Every one of these measures was assuredly necessary: not a single one of the new controls can be regarded as superfluous. But at the same time they were bound to create dislocation. It appears in retrospect that certain of them created much more dislocation than they need have done. The commodity war risks insurance premiums, for example, fixed at 6 per cent per annum, created great difficulty for traders and were in many respects unjust in their incidence: firms in trades with a quick turnover of stocks suffered hardly at all, but for firms with slow turnover they caused real hardship. The Government's objective apparently was to make the scheme as actuarially sound as possible, but in view of the confusion which was caused the Government would probably have done better if it had charged a nominal premium and financed the compensation from the Budget. Another source of disorganization was the rapidity with which certain "controls" changed their minds: Order after Order was issued, each contradicting the last. By September 30th, for example, no less than five Orders had been issued by the timber control, each with its relevant Directions. Again, insufficient attention was paid by some of the controls to the procedure for completing existing pre-war contracts—in this, the non-ferrous metal control was said to be at fault.

More serious than these inefficiencies, however, was the Government's failure to tell the public what it was doing and what it intended to do. The relevant Orders were frequently unobtainable, and business men were unable to get any sort of elucidation of the objectives of policy. No distinction was drawn between temporary measures, such as the preliminary prohibition of certain imports and exports, and the permanent measures of control. It was obviously ridiculous to suggest, as some people suggested by implication, that everything should have been cut-and-dried in detail from the start. But the Government should certainly have made its intentions on general policy absolutely clear, should have issued the Orders in language which the business man could understand without referring to previous Orders, and should have taken trouble to explain what it was trying to do, and why. In effect, the public was ignored, and the information which business men wanted in order to enable them to make their plans was withheld. This certainly increased unemployment and dislocation; the business man, completely befogged, played for safety by dismissing his workers.

A typical example of the confusion which was created was the priority policy of the material controls. On September 6th, the Government issued a Priority of Work Order, which instructed firms to give priority to Government work. But no priority certificates were to be issued, because they would interfere with trade. The normal channels of supply of material were to be kept open, and if consumers could not get supplies of

a controlled material they were to get in touch with the relevant control. It seemed that the Government was intending to wait until scarcity arose before exerting any priority powers at all. But then the controls proceeded to require that consumers should get licences for supplies of material. These licences were presumably to be allotted according to priority schedules. The most effectively organized control, the iron and steel control, immediately absolved certain consumers—makers of agricultural machinery, mining machinery, railway material and so on—from applying for licences, on the grounds that such licences would automatically be granted. A state of affairs developed, therefore, in which there was neither a clear and unified priority scheme nor complete freedom to buy commercially. Consumers could hardly be blamed for failing to understand what the policy was, and for complaining about bureaucracy. Moreover, the Government's reluctance to explain what it was doing gave admirable opportunity to vested interests to attack the controls and to attempt to discredit them. The Ministry of Food's schemes for conserving food stocks by rationing and schemes for effecting real economies in the processing and distribution of food by pooling were consequently abandoned.

Another fact which tended to reduce public confidence was the absence of overt measures for expanding the war sector. Of the newly unemployed, only very few were able to join the armed forces. Some got full-time jobs in civil defence—but after six air-raidless

weeks their number was reduced—and a handful were needed in the new Ministries. In the House of Commons, Mr. Ernest Brown declared that everyone would be needed, and Mr. Burgin insisted that munitions output was being expanded as fast as possible. In the munition-making centres, workers were being taken on fast, and there was work to be done by those who had lost their non-essential jobs. But in London there was no sign of any preparation for the re-employment of the newly unemployed. On September 21st, Mr. Burgin gave an encouraging survey of what was being done to increase production, and on October 11th, Sir Kingsley Wood was even more emphatic about the expansion of aircraft production. But any realistic estimate of the requirements of a long war showed that hundreds of thousands of new engineering workers would have to be trained, and that hundreds of thousands of unoccupied persons would have to join the industrial system, and there was no sign of a plan for this. Moreover, the actual organization of supply was open to criticism: the Government's insistence on the separation of the Services' contracting departments, for example, was bound to lead to difficulties sooner or later.¹ Here again, there was too much reticence and too little clarity.

Again, there was a very strong impression that, although individual controls were doing reasonably well and were necessary, they were pulling in different directions. A case was quoted² in which ship-owners

¹ See Chapter IX, p. 185.

² *Financial News*, September 26th.

had been successful in playing one control off against another, with the result that an excessive freight rate was eventually paid. Another example of failure to co-ordinate was seen in the plight of the fishing industry. At the outbreak of war, the Admiralty commandeered a large section of the fishing fleet, leaving the fishing towns temporarily derelict. At the same time, the public need for fish, when meat supplies might be cut off, was obviously very great, and expanding fish production was an important part of the war effort. This had been recognized by the Ministry of Labour, which had made fishing a reserved occupation. Thus the unemployed fishermen were unable to join the Navy and were unable to do their own jobs either. The supply of fish was curtailed, and retail fish prices by the end of September were 34 per cent above those of August 1st. Again, the exporters found themselves unable to get supplies of important materials through the controls, even if they were able to get export licences. In the financial control, there were similar confusions: minimum prices were fixed for Gilt-edged securities quite incompatible with the increased Bank rate; local authorities were compelled to pay excessive rates for short-term accommodation for A.R.P. expenditure. Many of these anomalies were the inevitable result of the rapid growth of the system of control. But nevertheless they gave the impression that each of the plans had been worked out separately with wholly insufficient co-ordination. By the middle of October the position was very much better than it had been in the middle

of September, but there were still many anomalies and inadequacies in the control programmes.

What was disconcerting about the Government's economic policy was not the occasional overlapping of the controls and the petty bureaucracy which was involved in them. That was inevitable, and if there had been the expected intensive bombing during the first few weeks those who now criticize them so loudly would have been thankful for their existence. Much more disconcerting was the Government's failure to take the public into its confidence, to explain what was happening, and to enlist its co-operation. Most disconcerting of all, however, was the apparent absence of a long-term plan for the creation of a war economy. The individual measures were sound enough, but none gave the impression of being part of a concerted whole. There was no evidence that the Government had envisaged the sort of economy which it was trying to create, and was quietly taking the necessary steps to get there.

The best example of this was the Budget. In an earlier chapter, we saw that the Budget is the key to the whole war economy: if unsound budgetary policy is adopted, then all the maximum price and anti-profiteering legislation will inevitably fail; whereas if the budgetary policy is correct, then prices and profits will look after themselves. When full employment is reached, the Budget must be balanced in the sense that outgoings must be covered by taxation or by genuine savings. When Sir John Simon introduced his Emer-

agency Budget, full employment had not been reached. It was therefore unnecessary to balance the Budget, for in the uncertain conditions of the time the maximum stimulus which could be given to trade was called for. But at the same time, if the Government was planning to increase the war sector so fast that the point of full employment would be reached fairly quickly—say, by next spring—correct budgetary policy would require substantial reduction of consumption in 1940-1, and very drastic limitation in 1941-2, when the war effort would reach its peak.

The extent of the deficit for 1939-40, therefore, was of relatively little importance. Whether the deficit was £1,045,000,000 or £800,000,000 was of secondary importance. What was important was that the deficit should be smaller in 1940-1, and smaller still in 1941-2, and that the plans should be prepared for a really drastic limitation of consumption in those years. Moreover, the six-month interval before the time when Draconian measures would become imperative provided an admirable opportunity for education of the public in the essential economics of the position and in the need for drastic taxation later. It gave time, moreover, for the preparation of the necessary machinery of tax collection which would be required. The sound Budget, therefore, would in every sense have been an interim Budget, a preparation for war finance.

Sir John Simon's Budget, however, was the exact opposite. The Chancellor very properly stated the need for drastic budgetary action to limit consumption. He

then proposed a series of measures which gave the impression of being drastic, and which actually committed him to certain inadequate policies for 1940-1. He increased the standard rate of income tax to 7s. 6d. for 1940-1, and increased the surtax and estate duties. He announced, very surprisingly and wholly unjustifiably, a reduction in the allowance for earned income and for wives and children—so that the sacrifices to be made by the rentier bachelor would be less than those made by a married man who earned his income. He then proceeded to increase the duties on beer, sugar, tobacco and spirits, and Parliament subsequently enacted an excess profits tax. The net result of the Chancellor's action was to reduce the current deficit by £107,150,000 to £938,000,000 and to reduce the prospective deficit for 1940-1 by £226,600,000. The wisdom of this mitigation of the expansionist effect of Government spending in the current year was open to question. But as we have seen, the 1939-40 effects to be obtained from this Budget were of only secondary importance.

What was clear, however, was that the projected tax rates for 1940-1 were wholly insufficient. In order to cope with middle- and upper-class consumption, the yield of income tax and surtax will have to increase by something like £1,000,000,000 as the war effort reaches its peak. Sir John Simon, however, proposed to raise only an extra £160,000,000 in direct taxation next year. The taxation which he proposed for 1940-1 reduces the net income of the £100,000 a year man

(married, with one child) by 41 per cent; of the £10,000 a year man by 18 per cent; of the £1,000 a year man by 8 per cent, and of the £500 a year man by 5 per cent. None of these percentages would be remotely adequate to cut down consumption to the extent required. Similarly, the new indirect taxation, though in sensible proportion to the direct taxation, cannot reduce working-class and middle-class consumption by anything like the necessary extent. If the Chancellor planned new drastic taxation for 1940-1—a tax on earnings or a turnover tax or a retail sales tax—this would not matter. But by giving the impression that he was already imposing very drastic taxation which was as much as the public could bear, and by pouring cold water on projects for new taxes, and by suggesting that he was budgetting for the long-term, he effectively prevented himself from imposing new taxes of the order of magnitude required for 1940-1.

In these circumstances, it was very difficult to see how some element of price inflation could be avoided. Consequently, the avowed policy of price stabilization at pre-war or near-pre-war levels, and the anti-profiteering legislation based upon the prices of August 1, 1939, looked somewhat unrealistic. They might serve to hold back the increases in prices of some necessities, but they evidently could not prevent an increase in the cost-of-living (and consequent demands for increased wages) for the duration of the war. It seemed certain, indeed, that there would be persistent pressure upon the maximum prices, and that ultimately

these maxima would have to be raised. Already by the end of November this pressure was becoming strong, and the numerous wage advances which were being allowed threatened to make it irresistible before the spring. Equally unsatisfactory was the Government's failure to develop an export policy. Inevitably exports fell at the outset; materials had to be controlled, trade with the enemy had to be stopped, and so on. Both in September and in October the export level was 42 per cent below the corresponding months of 1938. The need for bigger exports to support sterling and to damage German trade was plain. But six Ministries¹ were concerned with this problem, their interests clashing, so even at end-November there was no sign of a concerted and aggressive export policy.

This failure to create a cohesive long-term policy was not surprising, for at no time since the end of the last war had there been constructive and energetic handling of economic problems. From 1936 onward, the Government had signally failed to appreciate the significance of the changes which rearmament and war preparation were making in the role of the Government in economic affairs. In peace-time, there was no co-ordination of the economic policies of the various Ministries, so it was hardly to be expected that the war planning would be comprehensive and decisive. The omission of all economic Ministries except Sir John Simon from the War Cabinet was significant, and significant also was

¹ Treasury, Ministry of Economic Warfare, Board of Trade, Ministry of Supply, Ministry of Shipping, Ministry of Food.

the failure to find first-class men to take charge of the new economic Ministries. Similarly, too much reliance was placed upon industrialists' and merchants' associations for the organization and operation of the controls,¹ and insufficient effort was made to mobilize the nation's resources of expert knowledge and to engage first-class men for full-time work in the Government's service.

In the first six weeks there were many creditable achievements. The new controls were imposed quickly and comprehensively, and in every way the policy was much more effective than that of 1914-18. Already, indeed, the nation was better organized economically for war than it had been in 1917. But there appeared to be a very real lack of constructive central planning and co-ordinated objective. Whether the appointment of Lord Stamp as economic adviser to the Cabinet and as chairman of the new inter-departmental committee would provide this central planning was still uncertain. Even after six weeks, public opinion was beginning to demand more positive and powerful economic co-ordination and planning, and by the end of November it seemed that the Government would not be able to resist the demand for long

¹ See Chapter IX, p. 189.

CHAPTER ELEVEN

THE ALLIES VERSUS GERMANY

BRITAIN'S ECONOMIC resources and the way in which they are being and should be mobilized have now been discussed in some detail. These resources make Britain's economic war potential. How does it compare with the economic war potentials of the other belligerents? Where does our superiority over Germany lie? And what economic strength does France exert in the war? It is certainly possible to come to very definite conclusions about the relative economic strengths of the Powers, and those conclusions must point directly to the result of the war. They might be falsified by some tactical military brilliancy or by stupendous military ineptitude, and they might be falsified by failure of the superior Power to throw its economic weight into the struggle. But provided that all Powers are equally well led and equally well organized—and the experience of past wars suggests that in the main that does happen—then the economic factor must be the decisive one.

There can be no doubt that the key to a nation's economic strength is its national income. The fate of Poland has shown that mere population, however courageous it may be, cannot stand up against an industrially developed nation with a high national

income. The national income is a measure of the nation's production, trade and whole economic activity. The national income per head of the population is the measure of the productivity of the citizens and their standard of life. Evidently the higher the standard of living the more the population can afford to reduce its consumption and transfer resources to the war sector. There is much more slack to be taken up before the population is forced down to subsistence level. If one is comparing communities with fundamentally different living standards, of course, some modification must be made to this. An average consumption of £20 per head would be poverty in a Western European country, but it would represent unheard-of opulence for the people of India and China. But of two nations which are comparable in living conditions, the one with the higher national income will be able to achieve the greater economic war effort.

The first criterion, therefore, is the national income and the national income per head. Estimates of these are given in the table on p. 224. Statistically, some are more adequate than others, and the difficulties of definition of national income are such that they are not precisely comparable. There is scope for error, too, in conversion of currencies from the national currency to sterling. In an era of pegged exchanges, the purchasing power of a currency in terms of sterling is not necessarily reflected in the exchange rate. For the purposes of this calculation, the net national incomes have been taken—after allowance for maintenance and

depreciation—and the currencies have been exchanged to sterling at the average rate which was ruling in the year of the estimate. For Germany, an exchange of RM.15 to the £ has been taken: the official rate of 12.30 is evidently artificial, and in actual fact the real purchasing power parity of the reichsmark is probably as low as 18 to the £. The rate of 15 is certainly conservative. For the United States, the 1929 national income is given although later figures are available, because the idea of the comparison is to give some idea of the relative potentials, and since 1929 the United States has been suffering from depression.

These are all peace-time estimates, of course, but in most cases they represent something like the peak which has been reached in each country. In wartime the national income of each of these countries will increase, even when measured in pre-war purchasing power. In *America's Capacity to Produce* it was estimated that even in 1929 the national income was 20 per cent below potential capacity, and in 1937 the national income was substantially below that of 1929. For Great Britain we have assumed earlier a gross national income of some £6,250,000,000—the equivalent to an increase of some 10 per cent in net national income over 1937. In France, 1936 was a year of depression, and it is probable that the national income could increase by 15–20 per cent under the stress of wartime conditions. The extent to which Germany can increase her national income, however, is very much less certain. In peace-time, every conceivable measure

TABLE XII
NET NATIONAL INCOMES*

Country	Year	National income (million)	Sterling Exchange	National income (£ million)	Population (million)	National income per head (£)
Great Britain	1937	£5,300	—	5,300	47.3	112
France	1936	Fr. 199,100	83.0	2,400†	41.9	57½
Germany	1937	RM. 70,972	15.0	4,730	67.8	70
Austria	1935	Sch. 5,748	26.5	218	6.9	32
Czechoslovakia	1937	Kr. 66,700	143	465	15.2	31
Poland	1933	Zł. 15,500	29.5	523‡	33.0	16
United States	1929	\$83,424	4.86	17,170	121.4	141
U.S.S.R.	1937	Yen 13,109	17.1	4,800	168.0	29
Japan	1936			765	69.5	11
Holland, Belgium	1937			980	17.0	57½
Scandinavia	1936			762	12.9	59
Canada	1937	\$4,576	4.94	930	11.2	83
Australia	1937-8	£A. 814	1.25	651	6.9	95
New Zealand	1937-8	£N.Z. 215	1.24	172	1.6	107
British India	1925-9	Rs. 20,680	13.3	1,560	260	6

* The figures are all taken from League of Nations' *World Economic Survey*, 1938-9, p. 84, except those of Britain, France, U.S.S.R., and British India. For Britain, Clark's figure is used. E. J. For France, De Bernonville's figure, quoted by *De la France d'avant-guerre à la France d'aujourd'hui*, p. 372. For U.S.S.R. Clark's estimate in *A Critique of Russian Statistics*, p. 68, corrected for 1937 prices and for established results of 1939 Soviet Census of Population. For British India, the source is Rao, *India's National Income*. The figure for Scandinavia is a total of Norway, Sweden and Denmark.

† The figure is perhaps a little low because of the widespread evasion of indirect taxation which existed in France at that time, which tends to falsify estimates based upon tax returns.

‡ In 1937, this was probably as much as 30 per cent higher.

has been taken to mobilize the economic resources to the full. The supply of skilled labour was organized up to the hilt, new workers—women, youths and old people—were brought into the industrial system, and working hours were increased to the maximum. There is some margin available for further expansion in the exploitation of Austria, Czechoslovakia and Poland. But when the job of political assimilation has to be undertaken at the same time as that of economic development, there are obvious difficulties in the achievement of spectacular results. Of the large countries listed in the table, the United States certainly has the largest margin for expansion of national income. France's margin is the next largest, followed by that of Britain. And the capacity of Germany to expand her national income is the least of all.

On the peace-time comparison, which favours Germany, the British national income is a little smaller than that of Greater Germany, but the income per head is overwhelmingly greater. Britain and France together, with a population roughly equal to that of Greater Germany, have half as much income again. If £30 per head is taken as the lowest possible consumption of a Western European people, Britain and France have a margin available for war-making of some £5,000,000,000, whereas Germany's margin can hardly exceed £3,250,000,000, even on the most favourable assumptions about the new resources obtained from Austria, Czechoslovakia and Poland. If the resources of the Dominions are taken into account,

the superiority becomes even more overwhelming. If the peoples of Canada, Australia and New Zealand alone sacrificed their consumption to the same extent as the British and French, another £1,000,000,000 or more would be available for the war effort of the Allies. This means that the Allies have a potential economic effort which outnumbers that of Germany in the ratio of at least three to two and probably as much as seven to four. The Allied peoples can afford in the real sense to spend three pounds on the conduct of the war where Germany can afford to spend only two.

By considering the consumption per head, instead of the national income per head, we come to even more spectacular conclusions. In 1937, the consumption per head of the German population (Old Reich) converted to sterling at the rate of RM.15 to the £, was about £59.¹ In Britain in that year it was £91.² In our earlier estimates of the magnitude of the war effort, we suggested that consumption would have to be cut down to £60 per head. This means that even at the peak of the war effort, the level of consumption of the British people will be of the same order of magnitude as that with which the German people begin the war. The objective of the British economic effort is to reduce British consumption to the level from which the Germans begin to reduce. This must mean that the British nation has resources which can be drawn upon to an extent far in excess of anything that the German

¹ Balogh, *Economic Journal*, September 1938, p. 467.

² From Clark, *Economic Journal*.

people can conceivably hope to do. In the long run, British economic resources must necessarily be overwhelming.

In passing, it is interesting to consider the position of the neutrals. The preponderance of the United States is very striking. It appears, indeed, that the United States could generate an economic potential equivalent to the combined potentials of Britain, France, Germany and the Soviet Union. This fact, together with a very favourable geographical and strategic position, makes it practical and reasonable for the United States to adopt a policy of isolation and neutrality. Nothing less than an all-inclusive European alliance could conceivably menace their security. At the same time, of course, this tremendous economic potential demonstrates that if America's resources were thrown into the struggle on the Allies' side, their entry would be decisive in the long run. The other great neutral, the U.S.S.R., has a national income comparable with those of Britain and Germany. But despite the herculean efforts of her Government, the national income per head is still deplorably low. The figure of £29 per head gives perhaps an unduly unfavourable impression of the relative productivity of the Russian people compared with Western Europe, for a very much larger part of the population consists of children. Comparison of income per occupied person is somewhat less unfavourable to the Soviet Union.¹ But nevertheless it is

¹ U.S.S.R. about £75 per occupied person, Great Britain £240, U.S.A. £350.

plain from these figures that the Government cannot divert a substantial part of the nation's resources away from the satisfaction of consumption needs to war-making. In twenty years' time, the position may be different. But at present the economic potential of the Soviet Union is a less significant source of strength than its geographical position.

Japan appears to have an income per head even lower than that of the Soviet Union, and the absolute size of her national income is not impressive. Under the stress of war conditions, the national income is estimated by a German expert to have risen to 18-19,000,000,000 yen in 1938, the equivalent, say, of £1,000,000,000. The official exchange rate, however, is a very unreliable guide: retail prices in Tokyo rose by 25 per cent between 1936 and 1938, while the exchange rate remained unchanged. The 1936 national income, therefore, is a better guide to Japan's economic strength. The difference in subsistence level between Japanese and Western European conditions falsifies any comparison of income per head, although the figure certainly does not disprove the generally held belief that Japan's war with China is as much as she can stand economically at the present time.

No estimates exist of the Italian national income, but it is highly unlikely that it is more than £1,500,000,000—which would be equivalent to some £37 per head. Here again, the Mediterranean standard of living and subsistence level are lower than the required standards for Northern Europe. The national incomes of the

traditional neutrals are somewhat lower than the traveller would expect, judging from the general standard of life. The Dutch and Belgian incomes per head are almost exactly the same as those of France, which is in accordance with general observation. The Scandinavian income per head, however, appears to be no more than 53 per cent of the British. The difference is partly statistical, for the Scandinavian national incomes were at least 10 per cent higher in 1937 than they were in 1936, the last year for which estimates are available. This brings them up to about 60 per cent of the British. Sweden, on that reckoning, is about 75 per cent of the British, the average being pulled down by Norway. The fact clearly is that the greater equality of income distribution in the Scandinavian countries means that the real standard of life is very much higher in comparison with the British or German than the bare averages suggest. In terms of war potential, it may be added, the more equal the distribution of income the better, for the greater the equality the greater the absolute reduction of national consumption is possible with the least hardship.

The second important criterion of economic war potential is the extent to which a nation can get the necessary supplies of foodstuffs and raw materials—and also of finished munitions—which it does not produce within its own frontiers. The national income criterion is evidently meaningless if supplies of imported materials are not available. There are three points here. First is the extent of self-sufficiency, and the degree of

dependence upon imported material. Second is the nation's ability physically to bring the supplies to its own frontiers. Third is its ability to pay for them if it can get them. These three criteria are all interdependent. If a nation cannot get supplies and cannot pay for them, then it can carry on the war only if it is self-sufficient. But the dependence upon imports is not in itself a source of weakness, provided that imports can be transported and paid for in wartime. We must consider dependence upon imports, ability to transport and ability to pay as a whole.

Of the three Western Powers, of course, Britain is the least self-sufficient. Britain's retained imports in 1937 were equivalent to 18 per cent of her national income; France's retained imports in 1936 were equivalent to 11 per cent, and Germany's to $7\frac{1}{2}$ per cent. The United States, of course, is the most self-sufficient of all the Powers: her retained imports are about 5 per cent of the national income. Of the belligerents, Germany is unquestionably the most self-sufficient. But whereas Britain and France were conducting normal trade before the war, importing luxury and semi-luxury foodstuffs, raw materials and manufactured goods, Germany had already restricted imports to the bare minimum needed for carrying on rearmament. The needs of the expanding war sector will compel Britain to import as much as she imported before the war¹: the additional supplies of materials and munitions will at least be equivalent to the excluded unnecessary

¹ Chapter VI, p. 127-8.

imports. But Germany has no such margin of excludable imports, and consequently her demand for imports will tend to rise rather than fall. Under the Four-Year Plan, her self-sufficiency has been taken to the limit. The war machine can be kept going for some months from the dwindling stocks of material. But in the long run, at least the 1937 level of imports must be maintained.

This hard core of Germany's imports is absolutely essential for the conduct of the war. The statistician Adolf Hitler told the world on February 20, 1939, that Greater Germany was only 81 per cent self-sufficient in food and fodder. The official figure is 83 per cent for Germany and 75 per cent for Austria.¹ In fats, of course, the deficiency is gravest. In the years 1935-38, the Old Reich imported 44.7 per cent of her supply of edible fats,² and recent acquisitions have in no way eased this position. Even Poland was a net importer of oils and fats. In raw materials, of course, the position is much less favourable even than that of food. According to the *Institut*,³ Germany is dependent upon imports for 35 per cent of her supply of raw materials. Only one-third of her peace-time petrol consumption is provided by the expensive oil-from-coal plants and the small natural oil reserve.⁴ Even if domestic supplies could be doubled, at tremendous

¹ *Institut fuer Konjunkturforschung* February 9, 1939.

² *The Economist*, September 16, 1939, p. 515.

³ *Institut fuer Konjunkturforschung*, July 28, 1938.

⁴ *Deutsche Volkswirt*, March 4, 1938.

cost in coal and man-power, at least two-thirds of the wartime consumption would have to be imported. In iron ore, the position is as bad. Intensive efforts have been made to develop domestic mines, but the ore is of very low grade, and very expensive to smelt. Even with the Austrian ore, which is of rather better quality, Greater Germany must still rely upon imports for some two-thirds of the iron content of the ore she consumes.¹ In non-ferrous metals, again, Germany depends upon imports. Before the war, she was nearly self-sufficient in zinc, and Poland's production provides the necessary addition. The acquisition of Austria gives her sufficient magnesite. But she produces only some 15 per cent of her copper, 30 per cent of her lead, and is an importer of bauxite, the main source of aluminium. Of nickel, tin, chrome, wolfram and antimony she has no domestic supplies at all.

Great attempts have been made to establish synthetic rubber production, but after the first fanfares with which Buna was greeted by the German press, there has been an ominous silence. At most one-fifth of Germany's consumption is supplied by synthetic means, and the best commentary upon the attempt to become self-sufficient is the decree of September 13, 1939, which requisitioned all rubber tyres except those of vehicles used specifically for national service.² Similarly the valiant efforts to become independent of imported textile fibres are reported to have succeeded only in

¹ *The Economist*, October 28, 1939, p. 135.

² *Frankfurter Zeitung*, September 14, 1939.

reducing dependence upon imports to 58 per cent of consumption.¹ Finally, Germany now has a substantial export surplus of coal—the loss of the Saar mines is very adequately compensated by the gain of the Polish fields—and she also has an export surplus of potash. The acquisition of Austria and Czechoslovakia makes her nearly self-sufficient in timber. The Polish export surplus of timber is probably enough to render Germany wholly independent of outside supplies.

The position of Britain and France, of course, is equally precarious. According to Friedensburg, again, Britain depends upon imports for 45 per cent of her material supply and France for 52 per cent. The facts of Britain's dependence upon imported foodstuffs and materials have already been set out.² France could probably be self-sufficient in food, given a good harvest—she is a net importer of foodstuffs, but the import surplus consists mainly of semi-luxuries such as wine, coffee, fruit and cocoa. She is the biggest producer of iron ore and bauxite in the world, and is second to Germany in potash production. But she depends upon imports for 35 per cent of her coal consumption, and she has no rubber, copper, lead, zinc, or tin. Except for flax, she has no substantial production of natural textile fibres, and she has a deficiency in timber. For petroleum, France is entirely dependent upon imports. In wartime, the supplies of iron ore and bauxite are tremendous natural advantages—the change in the

¹ *Deutsche Volkswirt*, January 6, 1939.

² Chapter VI, p. 118.

ownership of the Lorraine ore-fields, of course, is the decisive reason why France's economic potential in relation to Germany is now stronger than it was in 1914. But France, like Germany and of course like Britain, depends upon imports. It is perhaps interesting to add that Friedensburg gives a figure of 90 per cent self-sufficiency in materials for the United States, and one of 80 per cent for the Soviet Union.

If all imports were cut off, therefore, the war would be over. That appears clearly from these figures. We now pass to the second point—the availability of imports. It is as certain as anything can be in this very peculiar war that Britain and France will retain control of the seas. They will therefore be able to get their imports from outside Europe without serious hindrance, whereas Germany will be able to get them only through neutrals—a procedure which the Allies will be able to restrict. At the same time, Germany will be unable to get supplies from France and Britain, and also from Spain, while France and Britain have difficulty in getting them from Central and Eastern Europe and from the Baltic countries. In Table XIII the source of the three Powers' imports is shown.

On the assumption that Britain and France are unable to get supplies from the Baltic States, the U.S.S.R., Central and Eastern Europe and, of course, Germany, 13.2 per cent of Britain's imports and 15.6 per cent of France's are lost or seriously endangered. Some supplies could come from the Balkans, of course, so the position is really rather more favourable than

that. If Germany is unable to get supplies from outside Europe, from France and Britain and from Spain and Portugal, on the other hand, 55·5 per cent of her imports will be cut off. Even for the remaining 44·5 per cent, moreover, there may be some difficulty.

TABLE XIII

SOURCES OF BRITISH, FRENCH AND GERMAN
IMPORTS, 1937

<i>Countries</i>	<i>Britain (per cent)</i>	<i>France (per cent)</i>	<i>Germany (per cent)</i>
Allies	2·4	8·1	8·8
Germany	5·8	10·2	5·8*
Scandinavia, Low Countries, Switzerland	14·0	14·0	18·1
Baltic States, U.S.S.R., Central and Eastern Europe	7·5	5·7	16·6
Spain, Portugal	1·3	0·9	2·3
Italy	0·8	1·3	4·0
<hr/> Total Europe	<hr/> 31·8	<hr/> 40·2	<hr/> 55·6
Non-Europe	68·2	59·8	44·4
	<hr/> 100·0	<hr/> 100·0	<hr/> 100·0

* 1937 imports from Austria, Czechoslovakia and Poland.

Swedish iron ore, for example, normally comes down the west coast of Scandinavia, the Baltic being frozen for many months of the year: certain supplies through the traditionally neutral countries are in peace-time entrepôt trade and might consequently be cut off by the sea blockade. The blockade should therefore cut off at least half of Germany's imports and might conceivably cut off as much as 60 per cent of them.

In terms of materials, effective blockade cuts off three-quarters of Germany's copper imports, one-third of her iron ore, three-quarters of her oil and petrol, all her rubber, nearly all her cotton and wool, two-thirds of her maize and nearly all her imports of oil-seeds. These losses can to some extent be replaced by increased supplies from adjoining countries—particularly, of course, from the U.S.S.R. But the European countries east of the Rhine and the U.S.S.R. have no exportable surplus of textile fibres, rubber, oil-seeds, nickel or chrome. Even if Sweden sent her whole export surplus to Germany, it still would not compensate for the loss of Lorraine, North African and Spanish iron ore—and Sweden is very unlikely to do so. The whole Roumanian oil output would not suffice to fill the gap in Germany's wartime needs, and the technical problem of bringing supplies from Russia would be very great. Unless the neutrals can be used as centres for vast entrepôt trade, indeed, the blockade does cut off a large fraction of Germany's imports.

It must not be forgotten, either, that the transport problem involved in such a re-orientation of Germany's trade is very grave. Before the war, the German railway system was already working to full capacity, and a vast programme of rolling-stock renewal had been prepared. The creation of new railway communications throughout Eastern Europe in order to handle the increased traffic, and the motor transport required for a new road network would involve the expenditure of tremen-

dous resources of material—especially iron ore and petrol—and man-power. Even if the Russians were willing to help, they could contribute very little except workers. The Russian railway system is in a worse state of congestion than the German.¹ It would require literally years of effort, and a weakening of the war effort in the meantime, before enough transport facilities could be provided to enable Germany to maintain her supplies by diversion of trade through the accessible countries.

The result of this analysis is, therefore, that whereas the physical obstacles to import supply created by the war can have little effect upon the trade of the Allies, they cut off about one-half of Germany's imports at once—and that is the more essential half. By costly and lengthy development of the German and Russian railway systems, it might be possible for Germany to get her necessary imports from the east, but even that pre-supposes the willingness of the blockaders to allow Russia to import quantities of material vastly in excess of her own requirements through the Black Sea.

Even this would be possible, of course, only if Germany could pay for the goods. First and foremost Germany has no supplies of gold and foreign exchange,

¹ In 1936, the Russian railway system had a traffic density of 3,800,000 tons-kms. per km. per annum, compared with 1,170,000 for Germany and 830,000 for Britain. Clark, *A Critique of Russian Statistics*, p. 66. It is estimated by *The Economist*, September 2, 1939, p. 438, that if one-tenth of Russia's trucks were exclusively used for supplying Germany, their annual carrying capacity would be less than Germany's peace-time imports of iron ore alone.

nor has she any foreign assets which could be mobilized. The exact size of the Reichsbank's gold and foreign exchange holding is not known, but analysis of the German balance of payments since the Nazis came to power and suppressed the figures, together with the known return from the seizure of the holdings of the Austrian and Czechoslovakian National Banks, suggests that the total reserve cannot be more than RM.1,000,000,000, and is probably no more than one-half of that.¹ It may be sufficient to finance two months imports, but it is certainly not more. As for foreign assets, the Nazis have repeatedly undertaken searches and inquisitions among the population in the hope of finding some, but have now almost certainly exhausted them. Germany's record in her dealings with foreign creditors is so bad that even the Russians will hardly give them the great credits which they need in order to finance their imports in wartime. We arrive at the conclusion, therefore, that the Nazis will have to pay for their imports in exports. They will have to intensify the barter principle.

In 1937, Germany sent 55·1 per cent of her exports to countries with which she will still be able to trade. With these countries, moreover, she had a considerable export surplus. With them, indeed, she had an export surplus of over RM. 800,000,000—she bought imports to a total of RM.2,430,000,000, and sold exports to a

¹ Lajos, *Germany's War Chances*, p. 134, after a very careful analysis states that the gold and foreign exchange holding cannot be more than RM.500,000,000.

total of RM.3,270,000,000. Presumably these countries will continue to take the goods they have been taking, so that the maintenance of the old supplies through the old channels is likely and possible. But if Germany is to replace the imports cut off by the blockade, she must more than double her imports through these countries. Consequently, she will have to increase her exports to them by at least two-thirds. Can the traditional neutrals, the U.S.S.R., and Central and South-Eastern Europe take such quantities of German goods, especially in the face of British competition? Analysis of the trade lost by Germany outside Europe shows that the extra exports which Germany would be able to offer could consist to a very large extent of coal (especially Polish coal, of course), chemicals, machinery of all kinds, and iron and steel. The last three of these all compete heavily with the requirements of the war sector and with British exports. Germany will be forced, indeed, to attempt to pay for her imports in Polish coal and in machinery the plant and workers for which are sadly needed for the war effort. If Scandinavia and the Baltic States could be induced to take all their coal requirements from Germany—instead of, as at present, predominantly from Britain—and if the U.S.S.R. would take huge quantities of machinery, Germany might be able to pay for the increased material she required, provided that these neutrals could get it. Some measure of the magnitude of Germany's task, however, is given by the fact that even if Germany were able completely to cut out British and French exports to Scandinavia,

the Baltic States, the U.S.S.R., Holland, Belgium, Central and Eastern Europe and the Balkans, and substitute German exports for them, the proceeds would barely suffice to pay for the extra imports which would be required even to maintain the pre-war import level. We come to the conclusion, therefore, that the only way in which Germany can hope to get the imports which she requires and to pay for them is completely to exclude British and French trade from Europe, and in effect to conduct the whole of the trade of the traditional neutrals and Central and Eastern Europe as if it were all one unit. If the essential materials which are not produced anywhere in Europe could be transported to this all-Continental system, then if all British and French exports to Europe were stopped the German system could pay for what it was buying. That is Germany's only way out—and that is why, of course, Hitler conducts the diplomatic offensive towards the neutrals, and it is also why before very long he is likely to attack them.

These foreign exchange and financial difficulties will not trouble the Allies as seriously as they trouble Germany. In a sense, of course, the fact that the Allies will be able to purchase what they want makes their need for foreign exchange greater. Germany will in practice be forced to submit to a substantial reduction in her imports, and she is fortunate in that she has an export surplus normally in her trading with the countries from which she will be able to buy. In earlier chapters, the British foreign trade and exchange problem has

been discussed in some detail. We saw that there will probably be a large adverse balance of payments the settlement of which will involve the loss of part of the gold reserve and the mobilization of some of our foreign assets. But certainly the position is strong, for the readily mobilizable assets—gold and foreign securities—total something like £1,000,000,000—1,500,000,000, and the total of our resources which could be realized if the worst came to the worst is probably at least double this. The British Government can thus regard the adverse balance without alarm, although it must rightly be regarded with concern.

The French financial position is also very strong indeed. The Bank of France gold reserve is valued at 97,266,000,000 francs, the equivalent in gold at the current rate of 168s. per fine oz. of some £650,000,000. There is also the holding of the exchange equalization account, which at March 31, 1939, was the equivalent of £125,000,000 at the present rate, and has probably increased since then. In addition, there is a few million francs in foreign exchange held by the Bank of France. This is a tremendously strong first line of defence. France is also a creditor nation, with holdings of foreign securities which could be mobilized. At the end of 1937, these were estimated by MM. Léonard Rist and Philippe Schwob at between 80,000,000 and 130,000,000,000 francs-Poincaré,¹ that is, between £1,000,000,000—1,750,000,000. They point out, however, that a large part of this sum represented short-term

¹ *De la France d'avant-guerre à la France d'aujourd'hui*, p. 543.

funds—the result of the flight from the franc. Much of this has now been repatriated, and evidently it would be unwise to regard more than £1,000,000,000 as being solid asset. On the British analogy, probably not more than one-half represent assets which are at all easily realized. However, one can safely say that France has mobilizable assets of gold and foreign securities totalling some £1,000,000,000. On this showing, France has enough financial resources to finance something like three years' imports at the peace-time rate, whereas Britain has enough to finance hers for some eighteen months, and Germany has enough to finance hers for a few weeks. It is to be hoped, of course, that exports will be good enough to look after the bulk of the imports. But if export comes to a halt, Britain and France could continue to live on their capital for a very long time—long enough to win the war.

On this second criterion—dependence upon imports, ability to obtain them and to pay for them—the Allies' strength is preponderant. Germany is cut off from half of her supplies of essential foods and raw materials, and cannot replace them without grave difficulty, even in the most favourable political circumstances for herself. Britain and France are in a position to transport what they want and to pay for it, and are hardly inconvenienced in any serious way by their inability to trade with those parts of Europe which are in effect controlled by Germany. If by some extraordinary coup on Hitler's part the Allied naval strength was destroyed, the German position would immediately become vastly

superior. But with the naval facts as they are, there is no doubt of the overwhelming superiority of the Allies. This superiority, indeed, is even greater than that of the economic potentials.

The third criterion is the industrial structure and its adaptability to war-making. Can the nation produce munitions, even if it has the raw material? This is simply a question of the size of the nation's heavy industry. This, of course, is Germany's strength. In the size of her heavy industry, Germany is second only to the United States. Nevertheless, Britain and France together, with the Dominions and India, are equally strong. There are three useful statistical measures of this strength. The first is production of steel. The second is the number of metal-workers. The third is the extent to which the nation is motorized. In each of these, we shall find, the Allies are in a position at least of equality.

First of all, steel production. The production of Germany and Austria in 1938 was 22,830,000 tons (of 2,240 lb.). The production of Czechoslovakia in 1937, the highest year it ever achieved, was 2,280,000 tons, and that of Poland in 1937 was 1,430,000 tons. This gives a total for Greater Germany of 26,540,000 tons. The capacity to produce is not very much higher than that. If we allow for the more intensive exploitation of the Czech and Polish plants, and the removal of a little more slack in the Austrian plants, we cannot make the annual capacity more than about 28,000,000 tons. Moreover, the Saar plants, which produced as

much as 2,000,000 tons a year, are presumably out of business—or will be out of business soon. On the other side of the Rhine is the French maximum output of some 10,000,000 tons. In 1937, the French plants produced only 7,800,000 tons, but in 1929 they produced 9,550,000 tons, and there is no reason to believe that they were working to capacity then or have any less potential capacity now. In Britain, the record annual output was 12,980,000 tons in 1937: the capacity of the industry, however, is officially estimated at some 14,700,000 tons. Moreover, the Dominions and India have a record annual output in 1937 of 3,520,000 tons.

On this showing, the joint steel-producing capacities of Britain, the Dominions, India and France are about 28,000,000 tons, or very much the same as that of Greater Germany. The total steel-producing capacity of the belligerents is thus equivalent to the actual output achieved by the United States in 1929, which was 56,430,000 tons, which again emphasizes the tremendous economic potential of the U.S.A. The U.S.S.R. produced steel in 1938 at the rate of 19,000,000 tons a year, and with the aid of German engineers the capacity would probably be somewhat greater. As recently as 1936, however, Russia was a net importer of finished steel goods. The other big producer in Europe is the Belgo-Luxemburg unit, which in 1929 produced 6,700,000 tons of steel ingots. This industry depends for two-thirds of its iron ore upon imports from France. Consequently, this steel capacity can hardly be available for Germany. The Allies are

certainly more favourably placed than they were in the last war. In 1917, the peak year of war effort, Britain, France, Italy and the Dominions produced 15,100,000 tons of steel, while the Central Powers produced 18,130,000 tons. Even in 1918, the Central Powers produced more than the Allies, and without American steel the Allies would probably have lost the war. Now, even if Germany can get supplies of iron ore—which as we have seen is very unlikely—the Allies have enough steel-producing capacity to hold their own.

In number of metal-workers, again, the Allied position is reasonably favourable. Britain has some 2,930,000 metal-workers of all kinds—steel, engineering, shipbuilding, motor manufacture and so on.¹ France in 1931 had 1,610,000 metal-workers,² and the number is now much the same as it was then. In the British Dominions there were in 1936 some 400,000 metal-workers.³ The Allied total is therefore 4,940,000 metal-workers. In June, 1938, the German labour Census showed that there were 3,740,000 metal-workers.⁴ This Census excluded Austria, which had some 350,000 metal-workers at the outside. In Czechoslovakia at the latest occupational census there were 391,000 metal-workers.⁵ Poland was much less industrialized than

¹ Table IX, p. 96.

² *De la France d'avant-guerre à la France d'aujourd'hui*, p. 83.

³ *Statistical Abstract of the British Empire*, 1937.

⁴ *Ministry of Labour Gazette*, March 1939, p. 85.

⁵ *Financial News*, Czechoslovak Supplement, April 12, 1937.

Czechoslovakia, both relative to her population and in absolute numbers. It is probably reasonable to say that Greater Germany has 4,750,000 metal-workers. The orders of number of metal-workers east and west of the Maginot Line are therefore much the same. Given the supplies of raw material, the capacities of the Allied and Greater German industries to work them into munitions are roughly equal.

Lastly, the degree of motorization of the nations concerned is significant. It is a guide to the capacity of the motor industry, which bears some relation to the potential capacity for aircraft production, and to the capacity to produce tanks, trailers, and army transport equipment of all kinds. It is, moreover, a guide to the number of motor mechanics and drivers and generally to the extent to which the population is motor-minded and consequently easily adaptable to the needs of motorized warfare. In this, rather surprisingly perhaps, the Allies are certainly at a great advantage. At the end of 1938, there were 2,542,000 private and commercial motor vehicles in use in Great Britain and 2,461,000 in use in France and the French Empire, while in Greater Germany, including Czechoslovakia, there were only 1,773,000.¹ Britain and France each had 490,000 commercial vehicles in use at the end of 1938, whereas Germany had 420,000. The Nazis, realizing the military importance of motorization, have made tremendous progress in the last five years. In that period, the number of commercial vehicles has

¹ *The Economist*, September 2, 1939, p. 435.

doubled, whereas in the same period that of Britain has increased only by 30 per cent. But Britain is still well ahead, and France is as highly motorized as Britain. In Britain and France there is one motor vehicle for every 19 of the population: in Germany there is only one for every 44.

In terms of actual production, too, Britain and France have a great superiority. In 1938, Greater Germany produced 364,000 private and commercial vehicles. But the British motor industry produced 493,000 vehicles in 1937, and the French industry, including some French assembly plants in the colonies, produced 223,000 vehicles in 1938.¹ Thus the capacity of Britain and France to produce motor vehicles is double that of Germany, and moreover there is a tremendous potential capacity in the Dominions. In 1938, the output of the British Empire—excluding Britain, of course—was 207,000 vehicles, or more than one-half of the German output. The Allies as a whole have a superiority of five to two. Separated from Allied territory only by the Detroit River, moreover, are the factories of the State of Michigan, where two-thirds of the world's motor vehicles are produced. On this score, indeed, the Allied potential strength is demonstrably superior.

Judged by this third criterion—the scale of heavy industry and the degree of motorization—the Allied strength is certainly not inferior to that of Greater Germany, and in some important respects is at an advantage. We have found, therefore, that the Allies

¹ *The Economist*, September 2, 1939, p. 435.

have superior economic potential of the order of three to two, that they can exert overwhelming superiority in ability to transport imports and to pay for them, that the size of their heavy industry is roughly equal to that of Germany, and that their degree of motorization is very substantially greater than Germany's. This means that the war must be won, for in modern warfare economic strength must necessarily be decisive.

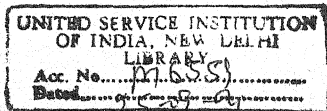
The fact that we possess this economic superiority, however, is no reason for complacency. Unmobilized, this strength may actually be a source of weakness, for its existence lulls Government and people into a sense of false security. Whatever other criticisms can be made against the German Government, no one can accuse it of this. Even before the war the full economic strength of the German nation was being exerted, and in the first few weeks of war a flood of new decrees completed the process. By the time this book appears, the German industrial system will be working on a complete war footing, and will be exerting the maximum potential of which it is capable. Raw material shortage will not have become critical, for there are probably enough stocks to feed the war industry for some months. All non-essentials will have been curtailed, and a vast output of war material will be leaving the factories. For six years the Nazi planners have been preparing their plans for the rapidest possible transformation to a war economy. Enough munitions and aeroplanes have been made before the war to enable the military effort to be pushed to the maximum from

the start, and the objective has been to effect the transformation to a war economy so fast that by the time the initial stocks are used the full productive force of the nation will be exerted to maintain the military effort.¹

Thus, despite her real inferiority in war potential, Germany will be able to exercise perhaps even superior military effort in the first few months—say until the spring of 1940. In a war which appears from the outset to be a war initially of politics and propaganda and threat and counter-threat rather than a war of the pattern of 1914-18, this a highly important advantage. By dint of it, Germany can achieve limited objectives rapidly and effectively—such as the annexation of Poland—and can then bring about situations in which her political and propagandist skill can be used to maximum effect. By repeated peace offensives and by skilful use of their Fifth Columns in the democratic States, moreover, the Nazis hope to prolong this state of affairs indefinitely. They hope by these means to hinder and delay the mobilization of the Allied economic and industrial strength and thus to retain their short-term equality or even supremacy. In the meantime, of course, they continue quietly with their own industrial mobilization in order to exert the maximum strength and to maintain it for the maximum time should their political and propagandist offensives fail to have the desired effect.

¹ Sternberg, *op. cit.*, pp. 236-49, discusses this interestingly and gives illuminating quotations from the Reichswehr experts on this aspect of Nazi policy.

This puts British and French industrial mobilization into proper perspective. Rapid and smooth transformation of the national economy to a war footing becomes imperative, for it is the only means we have of getting the supremacy and initiative first of all in the diplomatic and propagandist battle and secondly of crushing Hitler's armies and air force when he finds that diplomatic activity no longer secures him his objectives. Since war broke out, as we saw in the last chapter, some progress has been made in this transformation. But there is a lamentable lack of coherent policy and cohesive planning. The sooner we have an Economic General Staff in a Ministry of Economic Planning, and the sooner we begin to move forward to a drastic limitation of non-essentials and an even more comprehensive mobilization of the nation's engineering resources, the sooner we shall be in a position to state our peace terms and to enforce them if they are declined.



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